

10/563,471

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NEWS 1 Web Page for STN Seminar Schedule - N. America  
NEWS 2 NOV 21 CAS patent coverage to include exemplified prophetic  
substances identified in English-, French-, German-,  
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NEWS 3 NOV 26 MARPAT enhanced with FSORT command  
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NEWS 10 JAN 07 WPIDS, WPINDEX, and WPIX enhanced Japanese Patent  
Classification Data  
NEWS 11 FEB 02 Simultaneous left and right truncation (SLART) added  
for CERAB, COMPUAB, ELCOM, and SOLIDSTATE  
NEWS 12 FEB 02 GENBANK enhanced with SET PLURALS and SET SPELLING  
NEWS 13 FEB 06 Patent sequence location (PSL) data added to USGENE  
NEWS 14 FEB 10 COMPENDEX reloaded and enhanced  
NEWS 15 FEB 11 WTEXTILES reloaded and enhanced  
NEWS 16 FEB 19 New patent-examiner citations in 300,000 CA/CAPLUS  
patent records provide insights into related prior  
art  
NEWS 17 FEB 19 Increase the precision of your patent queries -- use  
terms from the IPC Thesaurus, Version 2009.01  
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NEWS 19 FEB 23 MEDLINE now offers more precise author group fields  
and 2009 MeSH terms  
NEWS 20 FEB 23 TOXCENTER updates mirror those of MEDLINE - more  
precise author group fields and 2009 MeSH terms  
NEWS 21 FEB 23 Three million new patent records blast AEROSPACE into  
STN patent clusters  
NEWS 22 FEB 25 USGENE enhanced with patent family and legal status  
display data from INPADOCDB  
NEWS 23 MAR 06 INPADOCDB and INPAFAMDB enhanced with new display  
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NEWS 24 MAR 11 EPFULL backfile enhanced with additional full-text  
applications and grants  
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NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V6.3,  
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

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L2 6 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 23:02:36 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 970 TO ITERATE

100.0% PROCESSED 970 ITERATIONS 172 ANSWERS  
SEARCH TIME: 00.00.01

L3 172 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	185.88	186.10

FILE 'CAPLUS' ENTERED AT 23:02:41 ON 15 MAR 2009  
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FILE COVERS 1907 - 15 Mar 2009 VOL 150 ISS 12  
FILE LAST UPDATED: 13 Mar 2009 (20090313/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3

L4 1498 L3

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.50	186.60

FILE 'REGISTRY' ENTERED AT 23:03:30 ON 15 MAR 2009  
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STRUCTURE FILE UPDATES: 13 MAR 2009 HIGHEST RN 1120564-02-4  
DICTIONARY FILE UPDATES: 13 MAR 2009 HIGHEST RN 1120564-02-4

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REGISTRY includes numerically searchable data for experimental and

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=>

Uploading C:\Program Files\Stnexp\Queries\10563471excludedcompound.str

L5 STRUCTURE UPLOADED

=> s l5

SAMPLE SEARCH INITIATED 23:05:00 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 54 TO ITERATE

100.0% PROCESSED 54 ITERATIONS

3 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 640 TO 1520

PROJECTED ANSWERS: 3 TO 163

L6 3 SEA SSS SAM L5

=> s l5 full

FULL SEARCH INITIATED 23:05:04 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 970 TO ITERATE

100.0% PROCESSED 970 ITERATIONS

68 ANSWERS

SEARCH TIME: 00.00.01

L7 68 SEA SSS FUL L5

=> d his

(FILE 'HOME' ENTERED AT 23:01:24 ON 15 MAR 2009)

FILE 'REGISTRY' ENTERED AT 23:02:04 ON 15 MAR 2009

L1 STRUCTURE UPLOADED

L2 6 S L1

L3 172 S L1 FULL

FILE 'CAPLUS' ENTERED AT 23:02:41 ON 15 MAR 2009

L4 1498 S L3

FILE 'REGISTRY' ENTERED AT 23:03:30 ON 15 MAR 2009

L5 STRUCTURE UPLOADED

L6 3 S L5

L7 68 S L5 FULL

=> s l3 not l7

L8 104 L3 NOT L7

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

187.32

373.92

FILE 'CAPLUS' ENTERED AT 23:05:53 ON 15 MAR 2009

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FILE COVERS 1907 - 15 Mar 2009 VOL 150 ISS 12  
FILE LAST UPDATED: 13 Mar 2009 (20090313/ED)

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=> s l8

L9 79 L8

=> d bib abs hitstr 1-9 l9

L9 ANSWER 1 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2008:1377173 CAPLUS

DN 150:10839

TI Novel medical application of puerarin and its derivatives as selective  
COX-2 inhibitor

IN Yang, Dajian; Zhong, Guoyue; Xu, Jiahong; Zhang, Yi; Li, Henghua; Huang,  
Xiaoping

PA Chongqing Academy of Chinese Materia Medica, Peop. Rep. China

SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 10pp.

CODEN: CNXXEV

DT Patent

LA Chinese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	CN 101301303	A	20081112	CN 2008-10069880	20080625
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PRAI	CN 2008-10069880		20080625		
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AB The invention relates to the medical application of puerarin and its  
derivs. as selective COX-2 inhibitor for preventing and treating  
osteoarthritis, rheumatic and rheumatoid arthritis, gouty arthritis,  
hepatitis, conjunctivitis, myocarditis, tumor- and diabetes-induced  
secondary inflammation, influenza, and trauma-associated pain.

IT 2889-07-8P 882979-98-8P

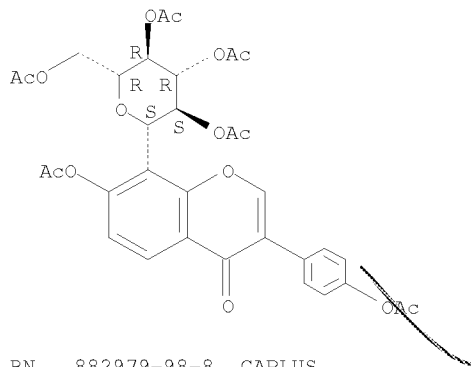
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological  
study); PREP (Preparation); USES (Uses)

(novel medical application of puerarin and its derivs. as selective  
COX-2 inhibitor)

RN 2889-07-8 CAPLUS

CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[4-(acetyloxy)phenyl]-8-(2,3,4,6-  
tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



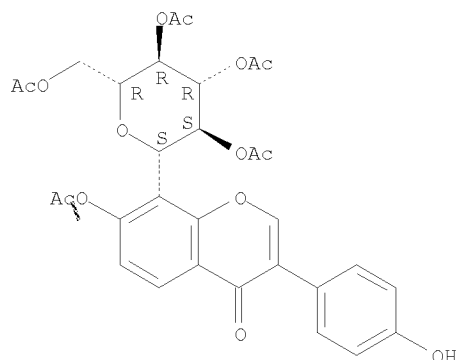
RN 882979-98-8 CAPLUS

CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-(4-hydroxyphenyl)-8-(2,3,4,6-tetra-  
O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

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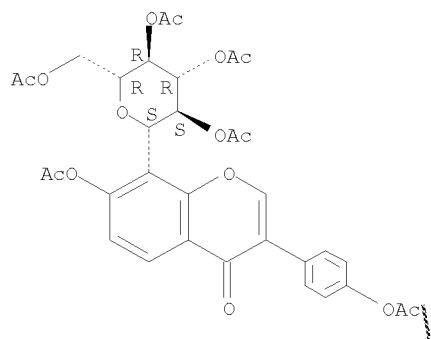
10/563,471

Absolute stereochemistry.



L9 ANSWER 2 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2008:455298 CAPLUS  
DN 149:216373  
TI Effect of acetylpuerarin on apoptosis and apoptosis-regulating genes induced by angiotensin II in vascular endothelial cells  
AU Feng, Yueqiu; Wang, Shumei; Zhang, Xiumei  
CS Department of Epidemiology, School of Public Health, Shandong University, Jinan, Shandong Province, 250012, Peop. Rep. China  
SO Zhongguo Shenghua Yaowu Zazhi (2007), 28(1), 11-14  
CODEN: ZSYZFP; ISSN: 1005-1678  
PB Zhongguo Shenghua Yaowu Zazhi Bianjibu  
DT Journal  
LA Chinese  
AB The effect of angiotensin II in different concns. and at different action time on apoptosis ratio and the expression of Fas, Bcl-2 in vascular endothelial cells was investigated, and the effect of acetylpuerarin on apoptosis was revealed. Flow cytometer was used to measure the apoptosis ratio and the expression of Fas, Bcl-2 induced by angiotensin II in different concns. and at different action time of acetylpuerarin. Apoptosis ratio and the expression of Fas, Bcl-2 were induced and increased by angiotensin II with the increase of concns. and action time. Acetylpuerarin had some effect on apoptosis ratio and the expression of Fas, Bcl-2, which were induced by angiotensin II. Apoptosis ratio and the expression of Fas, Bcl-2 were induced and increased by angiotensin II with the increase of the concns. and the different action time. Acetylpuerarin reduces the apoptosis ratio and the expression of Fas and Bcl-2 in vascular endothelial cells.  
IT 2889-07-8  
RL: PAC (Pharmacological activity); BIOL (Biological study)  
(effect of acetylpuerarin on apoptosis and apoptosis-regulating genes induced by angiotensin II in vascular endothelial cells)  
RN 2889-07-8 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[4-(acetyloxy)phenyl]-8-(2,3,4,6-tetra-O-acetyl-beta-D-glucopyranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



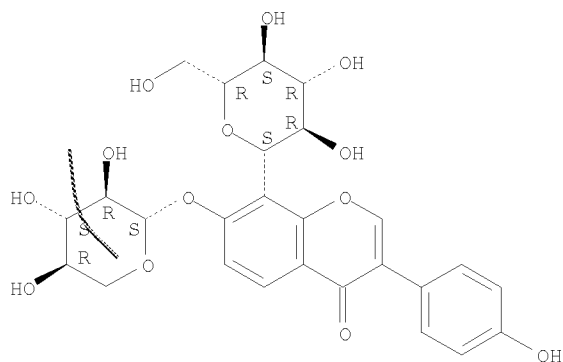
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L9 ANSWER 3 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2008:397912 CAPLUS  
DN 148:456492  
TI Compound effervescent formulation containing Radix Puerariae extract for preventing and treating osteoporosis, cardiovascular diseases and climacteric syndrome  
IN Zhao, Hongyi; Xu, Pinghui  
PA Zhengzhou Biocaro Pharmaceutical Science and Technology Co., Ltd., Peop. Rep. China  
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 7pp.  
CODEN: CNXXEV  
DT Patent  
LA Chinese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 101147754	A	20080326	CN 2006-10107067	20060919
PRAI	CN 2006-10107067		20060919		
AB	The title formulation can be tablet or granule containing Radix Puerariae extract (daidzein, soybean glucoside, puerarin and puerarin-7-xyloside), physiol. active substances (vitamin, amino acid, mineral element and/or L-carnitine), and medical adjuvant. The tablet or granule may be used as medicine for preventing and treating osteoporosis, cardiovascular diseases and climacteric syndrome, and as health food for delaying aging, plumping breasts, nursing ovaries, improving face luster, and expelling macula for adult women.				
IT	303114-83-2 RL: COS (Cosmetic use); FFD (Food or feed use); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (compound effervescent formulation containing Radix Puerariae extract for preventing and treating osteoporosis, cardiovascular diseases and climacteric syndrome)				
RN	303114-83-2 CAPLUS				
CN	4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)-7-( $\beta$ -D-xylopyranosyloxy)- (CA INDEX NAME)				

Absolute stereochemistry.



L9 ANSWER 4 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2008:171637 CAPLUS  
DN 148:331259  
TI Puerarin as an antioxidant fluorescence probe  
AU Tian, Yu-Xi; Han, Rui-Min; Wang, Peng; Wu, Yi-Shi; Zhang, Jian-Ping; Skibsted, Leif H.  
CS Beijing National Laboratory for Molecular Science (BNLMS), State Key Laboratory for Structural Chemistry of Unstable and Stable Species, Institute of Chemistry, Chinese Academy of Sciences, Beijing, 100080, Peop. Rep. China  
SO Chemical Physics Letters (2008), 452(4-6), 253-258  
CODEN: CHPLBC; ISSN: 0009-2614  
PB Elsevier B.V.  
DT Journal  
LA English

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AB Diphenolic isoflavonoid puerarin fluoresces in aqueous solution with maximal intensity at pH 8.5 ( $\Phi_{fl} = 0.042$ ,  $\tau_{fl} = 1.91$  ns). For acidic solns., weak fluorescence is attributed to fluorescent 7-monophenolate formed via excited-state deprotonation of neutral puerarin. For pH > 8.5, fluorescence decreases monotonically with an unchanged lifetime, suggesting that excited-state acidity of 4'-hydroxyl remains similar to the ground-state one, and that the diphenolate is non-fluorescent. The crucial role of A-ring 7-phenolate for fluorescence of puerarin is substantiated by absence (presence) of fluorescence for the 7-propylpuerarin (4'-propylpuerarin). Puerarin and its derivs. with the unusual properties may be explored to be antioxidant fluorescence probes.

IT 933984-63-5, 4'-O-Propylpuerarin 1010691-25-4, Puerarin monoanion 1010691-26-5, Puerarin dianion 1010691-27-6, 4'-O-Propylpuerarin monoanion

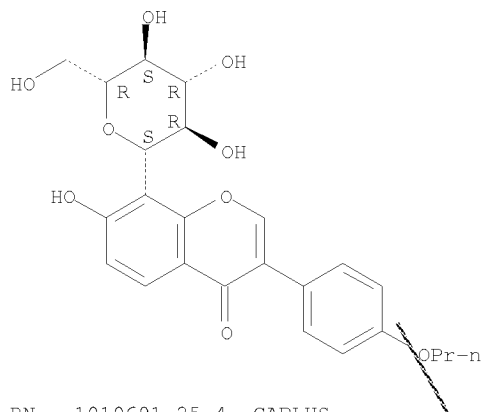
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)

(puerarin as an antioxidant fluorescence probe)

RN 933984-63-5 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-(4-propoxyphenyl)- (CA INDEX NAME)

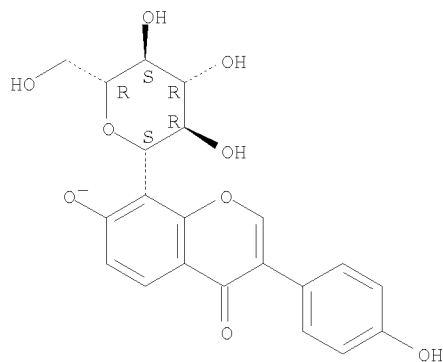
Absolute stereochemistry.



RN 1010691-25-4 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)-, ion(1-) (CA INDEX NAME)

Absolute stereochemistry.



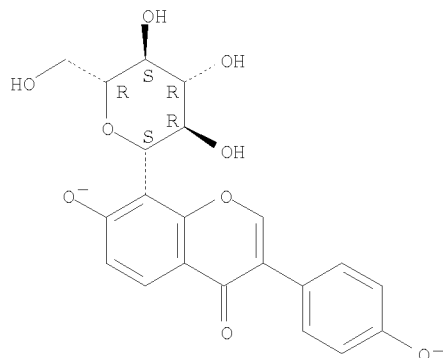
RN 1010691-26-5 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)-, ion(2-) (CA INDEX NAME)

Absolute stereochemistry.

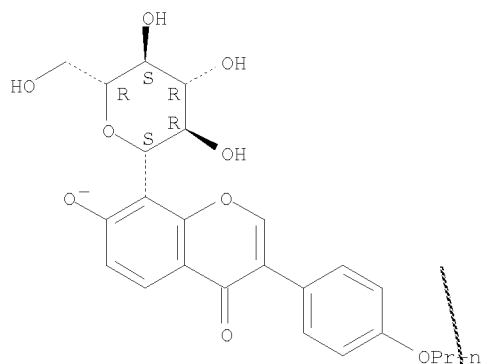


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RN 1010691-27-6 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-(4-propoxyphenyl)-, ion(1-) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2008:118631 CAPLUS  
DN 148:379808  
TI Radical Dynamics of Puerarin as Revealed by Laser Flash Photolysis and Spin Density Analysis  
AU Tian, Yu-Xi; Han, Rui-Min; Fu, Li-Min; Zhang, Jian-Ping; Skibsted, Leif H.  
CS Beijing National Laboratory for Molecular Science (BNLMS), State Key Laboratory for Structural Chemistry of Unstable and Stable Species, Institute of Chemistry, Chinese Academy of Sciences, Beijing, 100080, Peop. Rep. China  
SO Journal of Physical Chemistry B (2008), 112(7), 2273-2280  
CODEN: JPCBFK; ISSN: 1520-6106  
PB American Chemical Society  
DT Journal  
LA English  
AB Puerarin, a C-glycoside of daidzein, forms upon direct photoexcitation in acetonitrile an excited-state with a lifetime of 4.2 μs assigned by oxygen quenching and sensitized formation of triplet zeaxanthin as a triplet and phenoxyl radicals of ms lifetime insensitive to oxygen and with spin d. delocalized over the ACB isoflavonoid ring system, [ACB]•, as shown by laser flash photolysis and theor. spin d. calcs. Photoexcitation of A-ring 7-phenolate puerarin yields a [AC]• radical, which converts into the [ACB]• radical with a rate constant of 3.6 + 105 s-1 in 5% methanolic acetonitrile in a process triggered by B-ring deprotonation (4'-phenol). For the 7-phenolate with the 4'-phenol derivatized to yield a Pr anisole, no rearrangement of the initially formed [AC]• radical was observed. With the A-ring phenol derivatized, the 7-propyl-4'-phenolate forms a radical with spin d. delocalized over

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the CB ring system, [CB]•, together with a minor fraction of [ACB]• due to Pr radical dissocns. confirmed by BDE-calcs. Dianionic puerarin forms initially the [ACB]• radical, which is converted into the [CB]• radical in a slower process ( $1.6 \times 10^4$  s<sup>-1</sup>) assigned to 7-methylation. The radical dynamics is discussed in relation to puerarin/carotenoid antioxidant synergism at water/lipid interphases.

IT 623900-91-4 933984-62-4 933984-63-5

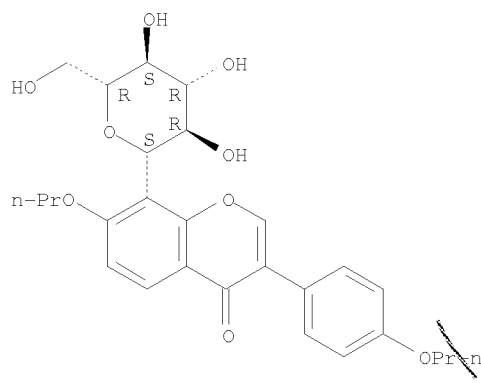
RL: PRP (Properties)

(radical dynamics of puerarin as revealed by laser flash photolysis and spin d. anal.)

RN 623900-91-4 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-propoxy-3-(4-propoxyphenyl)- (CA INDEX NAME)

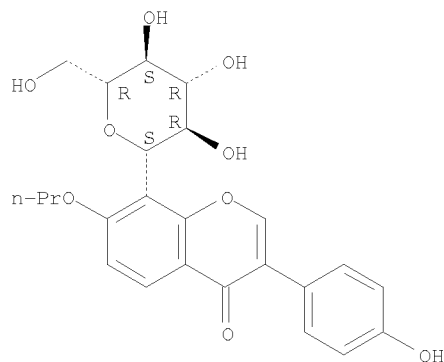
Absolute stereochemistry.



RN 933984-62-4 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)-7-propoxy- (CA INDEX NAME)

Absolute stereochemistry.

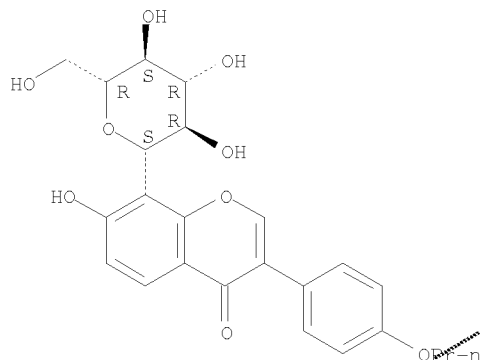


RN 933984-63-5 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-(4-propoxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.

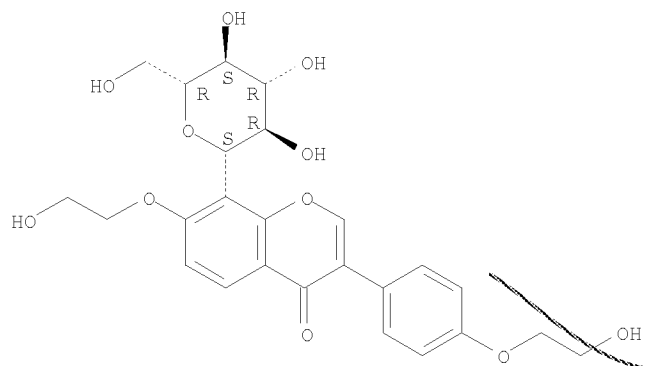
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RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 6 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2007:1486576 CAPLUS  
DN 148:322745  
TI Reducing the levels of ET-1 and IL-6 in ischemia-reperfusion injury rats with hydroxyethylpuerarin  
AU Wang, Ziyang; Wei, Xinbing; Zhang, Bin; Sun, Ru; Sun, Xia; Zhong, Ying; Zuo, Chunxu; Zhang, Xiumei  
CS School of Medicine, Shandong University, Jinan, Shandong Province, 250012, Peop. Rep. China  
SO Zhongguo Shenghua Yaowu Zazhi (2006), 27(5), 280-282  
CODEN: ZSYZFP; ISSN: 1005-1678  
PB Zhongguo Shenghua Yaowu Zazhi Bianjibu  
DT Journal  
LA Chinese  
AB The effects of hydroxyethylpuerarin on the levels of endothelin-1 (ET-1) and interleukin 6 (IL-6) in focal brain ischemia-reperfusion injury rats were investigated. Rats were divided into 6 groups randomly: sham-operate group, ischemia-reperfusion group, hydroxyethylpuerarin 15 mg/kg, 30 mg/kg, 60 mg/kg groups and nimodipine 0.2 mg/kg group. Rats were prepared with a model of focal brain ischemic injury by middle cerebral artery occlusion (MCAO), and then recovered perfusion by pulling out the suture after one hour. Each animal received drugs twice a day. Forty-eight hours after ischemia followed by 48 h reperfusion, the ET-1 and IL-6 levels in both blood and brain tissues were significantly increased. Compared with ischemia-reperfusion group, these levels were significantly decreased in all hydroxyethylpuerarin-treated groups. Hydroxyethylpuerarin could protect neuronal injury induced by focal brain ischemia-reperfusion, probably through decreasing the synthesis and release of ET-1 or inflammatory reaction induced by some cytokines, such as IL-6.  
IT 240131-05-9  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (reducing the levels of ET-1 and IL-6 in ischemia-reperfusion injury rats with hydroxyethylpuerarin)  
RN 240131-05-9 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-(2-hydroxyethoxy)-3-[4-(2-hydroxyethoxy)phenyl]- (CA INDEX NAME)

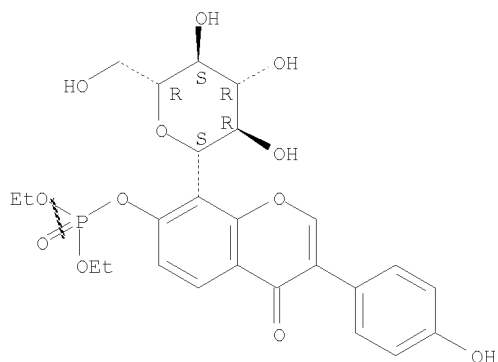
Absolute stereochemistry.



L9 ANSWER 7 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 2007:1422609 CAPLUS  
 DN 148:321805  
 TI Study on the interaction of bovine serum albumin with puerarin and its derivatives  
 AU Qu, Ling-Bo; Wang, Ling; Chen, Xiao-Lan; Yuan, Jin-Wei; Yang, Ran; Li, Ping  
 CS Department of Chemistry, Anyang Normal College, Anyang, 455002, Peop. Rep. China  
 SO Huaxue Xuebao (2007), 65(21), 2417-2422  
 CODEN: HHHPA4; ISSN: 0567-7351  
 PB Huaxue Xuebao Bianjibu  
 DT Journal  
 LA Chinese  
 AB In the paper, two new phosphorylated isoflavones of puerarin were successfully obtained by a modified Atheron-Todd reaction. Further, the interactions of bovine serum albumin (BSA) and puerarin or its phosphorylated products were studied under physiol. pH by fluorescence spectroscopy. The results showed that puerarin and its phosphorylated products all could form a non-covalent complex with BSA, while the interactions of the phosphorylated isoflavones with BSA were weaker than puerarin. The quenching mechanisms of them with BSA were suggested as a static quenching process, and the binding force was mainly a hydrophobic force. The distances between BSA and puerarin and its phosphorylated isoflavones were less than 7 nm according to the theory of the Forster energy transference. The relationship between the mol. structures of these compds. and the binding ability of them with BSA was preliminarily discussed, and the quenching consts. in the presence of various metal ions were also explored.  
 IT 913627-26-6P 1010820-83-3P  
 RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (interaction of bovine serum albumin with puerarin and its derivs.)  
 RN 913627-26-6 CAPLUS  
 CN 4H-1-Benzopyran-4-one, 7-[(diethoxyphosphinyl)oxy]-8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.

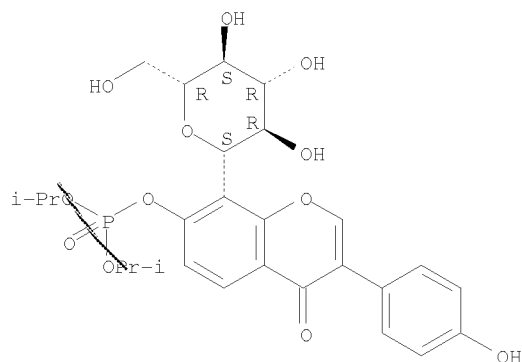
10/563,471



RN 1010820-83-3 CAPLUS

CN Phosphoric acid, 8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl bis(1-methylethyl) ester (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 8 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2007:1382104 CAPLUS

DN 148:206305

TI Neuroprotective effects of hydroxyethylpuerarin against focal cerebral ischemia-reperfusion in rats

AU Wang, Zi-Ying; Wei, Xin-Bing; Chen, Lin; Liu, Ping; Wang, Li-Xiang; Zhang, Bin; Sun, Xia; Zhang, Xiu-Mei

CS Institute of Pharmacology, School of Medicine, Shandong University, Jinan, Shandong, 250012, Peop. Rep. China

SO Chinese Journal of Physiology (Taipei, Taiwan) (2007), 50(5), 211-216

CODEN: CJPHDG; ISSN: 0304-4920

PB Chinese Physiological Society

DT Journal

LA English

AB Our present study was performed to investigate whether hydroxyethylpuerarin (HEP) has a neuroprotective effect on brain injury after focal cerebral ischemia/reperfusion by middle cerebral artery occlusion (MCAO) in adult male Wistar rats. Animals were subjected to one hour of middle cerebral artery occlusion and 48 h of reperfusion with the pretreatment of drugs (HEP 15, 30, 60 mg/kg or nimodipine 0.4 mg/kg i.v.) or vehicle. The behavioral tests were used to evaluate the damage to central nervous system. The percentage of brain infarct area was assessed in the brain slices stained with 2% solution of 2, 3, 5-triphenyl tetrazolium chloride (TTC). The pathol. histol. changes were observed by H&E staining and the occurrence of apoptosis was determined by flow cytometry. The results showed that pretreatment with HEP at doses of 15, 30, 60 mg/kg exhibited significant neuroprotective effects on rats against focal cerebral ischemia-reperfusion injury by markedly decreasing neurol. deficit scores and the percentage of infarct area, reducing necrosis and apoptosis of neurons. All these findings suggest that HEP might provide

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neuroprotection against focal cerebral ischemia/reperfusion injury probably through its antioxidant and anti-inflammatory property.

IT 240131-05-9

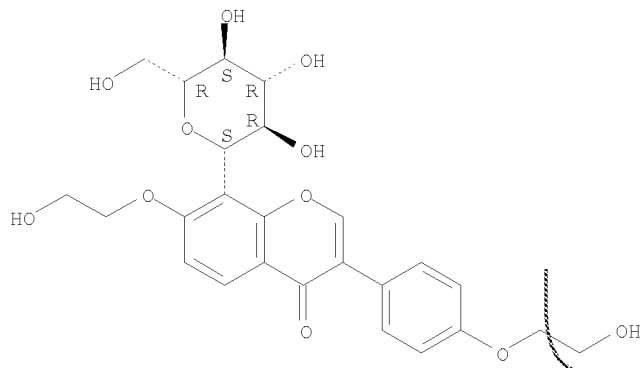
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(hydroxyethylpuerarin exhibited neuroprotective effects by decreasing neurol. deficit score, infarct area, necrosis and apoptosis in cortex and hippocampus of rat with cerebral ischemia-reperfusion injury)

RN 240131-05-9 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-(2-hydroxyethoxy)-3-[4-(2-hydroxyethoxy)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 9 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2007:1369736 CAPLUS

DN 148:134985

TI Disposition of flavonoids via enteric recycling: enzyme stability affects characterization of prunetin glucuronidation across species, organs, and UGT isoforms

AU Joseph, Tiby B.; Wang, Stephen W. J.; Liu, Xing; Kulkarni, Kaustubh H.; Wang, Jingrong; Xu, Haiyan; Hu, Ming

CS Department of Pharmacological and Pharmaceutical Sciences, College of Pharmacy, University of Houston, Houston, TX, 77030, USA

SO Molecular Pharmaceutics (2007), 4(6), 883-894

CODEN: MPOHBP; ISSN: 1543-8384

PB American Chemical Society

DT Journal

LA English

AB The authors characterized the in vitro glucuronidation of prunetin, a prodrug of genistein that is a highly active cancer prevention agent. Metabolism studies were conducted using expressed human UGT isoforms and microsomes/S9 fractions prepared from intestine and liver of rodents and humans. The results indicated that human intestinal microsomes were more efficient than liver microsomes in glucuronidating prunetin, but rates of metabolism were dependent on time of incubation at 37°. Human liver and intestinal microsomes mainly produced metabolite 1 (prunetin-5-O-glucuronide) and metabolite 2 (prunetin-4'-O-glucuronide), resp. Using 12 human UGT isoforms, the authors showed that UGT1A7, UGT1A8, and UGT1A9 were mainly responsible for the formation of metabolite 1, whereas UGT1A1, UGT1A8, and UGT1A10 were mainly responsible for the formation of metabolite 2. This isoform-specific metabolism was consistent with earlier results obtained using human liver and intestinal microsomes, as the former (liver) is UGT1A9-rich whereas the latter is UGT1A10-rich. Surprisingly, the authors found that the thermostability of the microsomes was isoform- and organ-dependent. For example, human liver microsomal UGT activities were much more heat-stable (37°) than intestinal microsomal UGT activities, consistent with the finding that human UGT1A9 is much more thermostable than human UGT1A10 and UGT1A8. The organ-specific thermostability profiles were also evident in rat microsomes and mouse S9 fractions, even though human intestinal glucuronidation of prunetin differs significantly from rodent intestinal

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glucuronidation. In conclusion, prunetin glucuronidation is species-, organ-, and UGT-isoform-dependent, all of which may be impacted by the thermostability of specific UGT isoforms involved in the metabolism

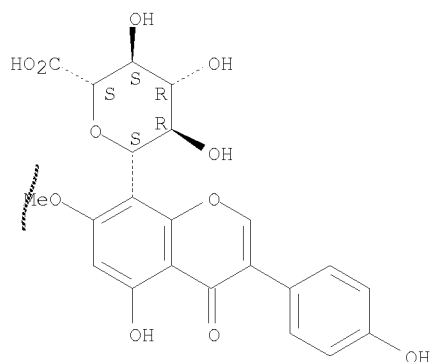
IT 1001078-71-2

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(disposition of flavonoids via enteric recycling and characterization  
of prunetin glucuronidation across species, organs, and UGT isoforms)

RN 1001078-71-2 CAPLUS

CN L-Gulonic acid, 2,6-anhydro-6-C-[5-hydroxy-3-(4-hydroxyphenyl)-7-methoxy-4-oxo-4H-1-benzopyran-8-yl]-, (6S)- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 10-79 19

L9 ANSWER 10 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2007:1156770 CAPLUS

DN 148:68979

TI Effect of hydroxyethylpuerarin on  $\beta$ -adrenergic receptor

AU Pan, Yan; Xu, Hongyan; Zhang, Xiumei

CS School of Medicine, Shandong University, Jinan, Shandong Province, 250012, Peop. Rep. China

SO Zhongguo Shenghua Yaowu Zazhi (2006), 27(3), 145-147

CODEN: ZSYZFP; ISSN: 1005-1678

PB Zhongguo Shenghua Yaowu Zazhi Bianjibu

DT Journal

LA Chinese

AB Hydroxyethylpuerarin (compound N-2035) is modified in structure from puerarin which is extracted from Chinese traditional medicinal plant, R. Puerariae. This study ws to investigate effect of hydroxyethylpuerarin on adrenergic receptors. The models of isolated rabbit aortic strips and isolated hearts were used to investigate the effect of hydroxyethylpuerarin on  $\alpha$  and  $\beta$ -adrenoceptors. Hydroxyethylpuerarin decreased the ranges of heart-tension curves and made the frequency slow. The effects were similar to propranolol. Hydroxyethylpuerarin could not obviously inhibit the contraction of the aortic strips induced by noradrenaline. Hydroxyethylpuerarin can block  $\beta$ -adrenoceptor on myocardium but has no obvious effect on  $\alpha$ -adrenoceptor on vessels.

IT 240131-05-9

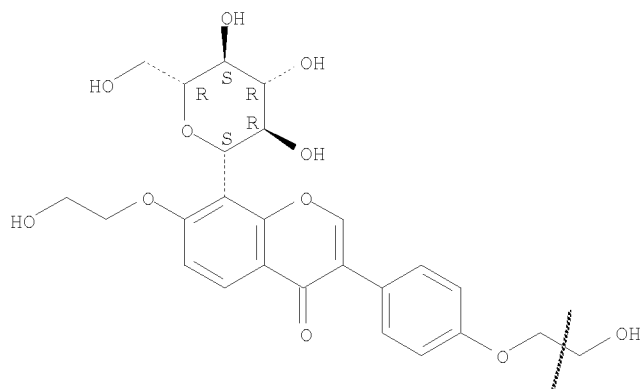
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(effect of hydroxyethylpuerarin on  $\beta$ -adrenergic receptor)

RN 240131-05-9 CAPLUS

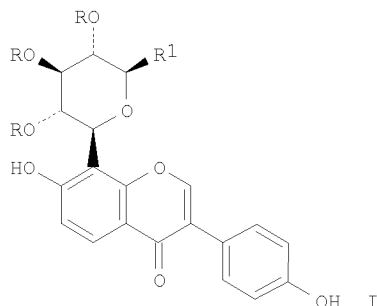
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-(2-hydroxyethoxy)-3-[4-(2-hydroxyethoxy)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.

McIntosh



L9 ANSWER 11 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 2007:1069253 CAPLUS  
 DN 149:10189  
 TI Synthesis of tritium-labeled puerarin - a potential antidipsotropic agent  
 AU Lee, D. Y. W.; Ji, X. S.; Zhang, X.  
 CS Department of Bio-Organic and Natural Products, Mclean Hospital, Harvard  
 Medical School, Belmont, MA, 02478, USA  
 SO Journal of Labelled Compounds and Radiopharmaceuticals (2007), 50(8),  
 702-705  
 CODEN: JLCRD4; ISSN: 0362-4803  
 PB John Wiley & Sons Ltd.  
 DT Journal  
 LA English  
 GI

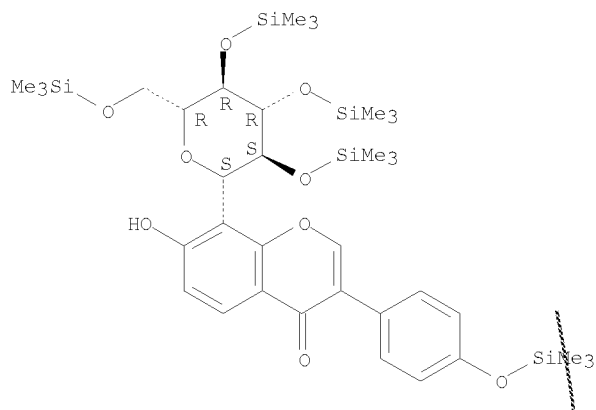


AB Puerarin (8- $\beta$ -D-Glucopyranosyl-4'-7-dihydroxyisoflavone, NPI-031G) is  
 the major isoflavone C-glycoside isolated from *Pueraria lobata*, a  
 traditional Chinese medicine widely used for the treatment of alc.  
 intoxication. In order to understand the mode of action of puerarin in  
 the reward pathway of the central nervous system and to study its  
 bioavailability and pharmacokinetics, we developed a synthetic route for  
 the preparation of tritium-labeled puerarin. The key intermediate I (R = TMS,  
 R1 = CH<sub>2</sub>OH) was obtained by trimethylsilyl protection of all hydroxyl  
 groups followed by selective deprotection. The corresponding aldehyde I  
 (R = TMS, R1 = CHO) was obtained through the subsequent oxidation of the  
 primary alc. Standard NaB[<sup>3</sup>H]4 reduction and hydrolysis produced the  
 tritium-labeled puerarin I [R = TMS, R1 = CH(<sup>3</sup>H)OH].  
 IT 1029605-66-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (synthesis of tritium-labeled puerarin as potential antidipsotropic  
 agent)  
 RN 1029605-66-0 CAPLUS  
 CN 4H-1-Benzopyran-4-one, 7-hydroxy-8-[2,3,4,6-tetrakis-O-(trimethylsilyl)-  
 $\beta$ -D-glucopyranosyl]-3-[4-[(trimethylsilyl)oxy]phenyl]- (CA INDEX  
 NAME)



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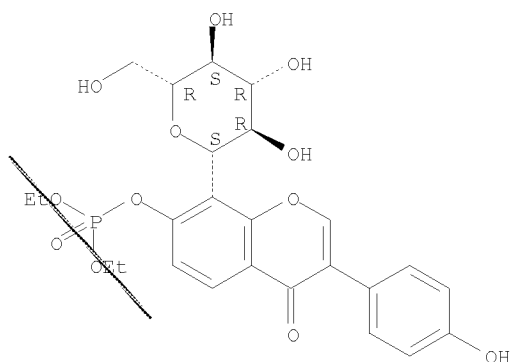
Absolute stereochemistry.



RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 12 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2007:962613 CAPLUS  
DN 149:32477  
TI Synthesis of a novel type of phosphates of puerarin  
AU Chen, Xiao-Lan; Qu, Ling-Bo; Yuan, Jin-Wei; Zhao, Yu-Fen  
CS Department of Chemistry, Key Laboratory of Chemical Biology, Zhengzhou University, Zhengzhou, 450052, Peop. Rep. China  
SO Journal of the Chinese Chemical Society (Taipei, Taiwan) (2007), 54(3), 583-585  
CODEN: JCCTAC; ISSN: 0009-4536  
PB Chinese Chemical Society  
DT Journal  
LA English  
OS CASREACT 149:32477  
AB A novel type of phosphated puerarin derivs. were synthesized through a simplified Atheron-Todd reaction for the first time. The structure of these compds. were elucidated by IR, ESI-MS and NMR. Moreover, the reason the dialkylphosphite reagent had different chemselectivities toward different hydroxys on the puerarin was discussed.  
IT 913627-26-6P 1010820-83-3P 1031330-85-4P  
1031330-87-6P 1031330-89-8P 1031330-93-4P  
1031330-95-6P 1031330-97-8P 1031331-00-6P  
1031331-02-8P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(synthesis of novel type of phosphates of puerarin)  
RN 913627-26-6 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-[(diethoxyphosphinyl)oxy]-8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.



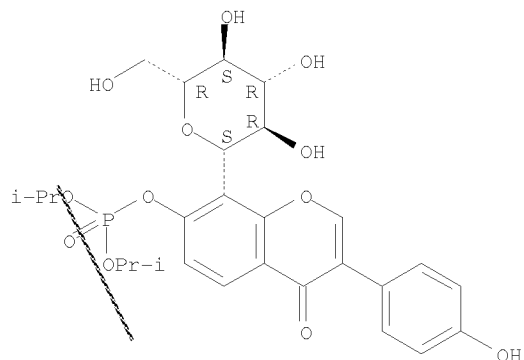
McIntosh

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RN 1010820-83-3 CAPLUS

CN Phosphoric acid, 8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl bis(1-methylethyl) ester (CA INDEX NAME)

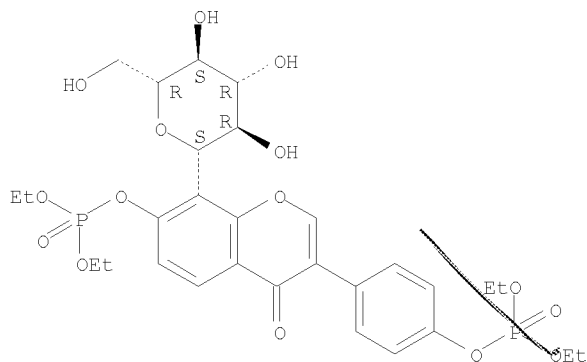
Absolute stereochemistry.



RN 1031330-85-4 CAPLUS

CN Phosphoric acid, 4-[7-[(diethoxyphosphinyl)oxy]-8- $\beta$ -D-glucopyranosyl-4-oxo-4H-1-benzopyran-3-yl]phenyl diethyl ester (CA INDEX NAME)

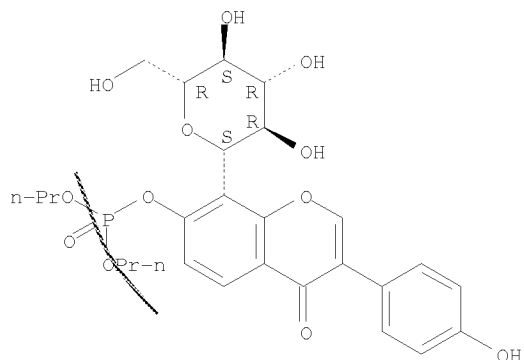
Absolute stereochemistry.



RN 1031330-87-6 CAPLUS

CN Phosphoric acid, 8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl dipropyl ester (CA INDEX NAME)

Absolute stereochemistry.



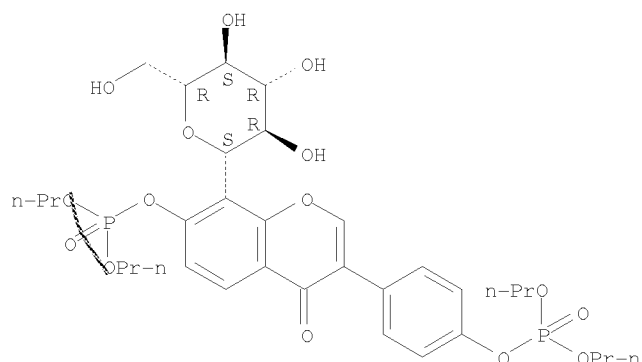
RN 1031330-89-8 CAPLUS

McIntosh

10/563,471

CN Phosphoric acid, 4-[7-[(dipropoxyphosphinyl)oxy]-8- $\beta$ -D-glucopyranosyl-4-oxo-4H-1-benzopyran-3-yl]phenyl dipropyl ester (CA INDEX NAME)

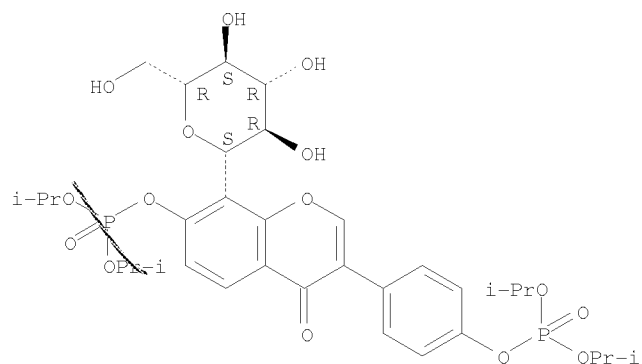
Absolute stereochemistry.



RN 1031330-93-4 CAPLUS

CN Phosphoric acid, 4-[7-[[bis(1-methylethoxy)phosphinyl]oxy]-8- $\beta$ -D-glucopyranosyl-4-oxo-4H-1-benzopyran-3-yl]phenyl bis(1-methylethyl) ester (CA INDEX NAME)

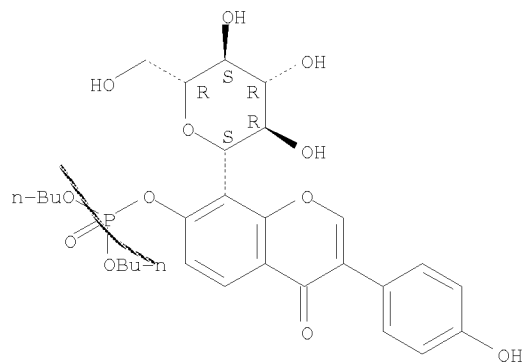
Absolute stereochemistry.



RN 1031330-95-6 CAPLUS

CN Phosphoric acid, dibutyl 8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl ester (CA INDEX NAME)

Absolute stereochemistry.



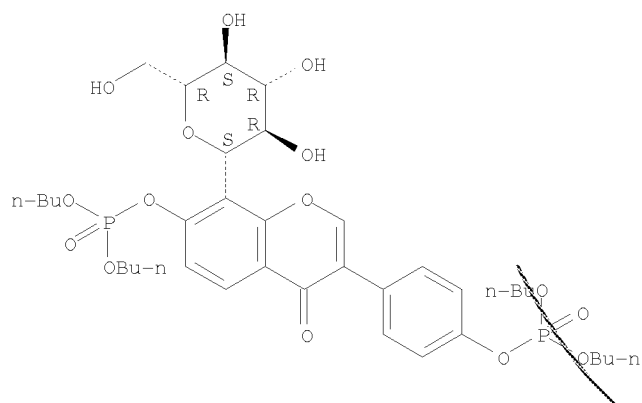
RN 1031330-97-8 CAPLUS

McIntosh

10/563,471

CN Phosphoric acid, dibutyl 4-[7-[(dibutoxyphosphinyl)oxy]-8- $\beta$ -D-glucopyranosyl-4-oxo-4H-1-benzopyran-3-yl]phenyl ester (CA INDEX NAME)

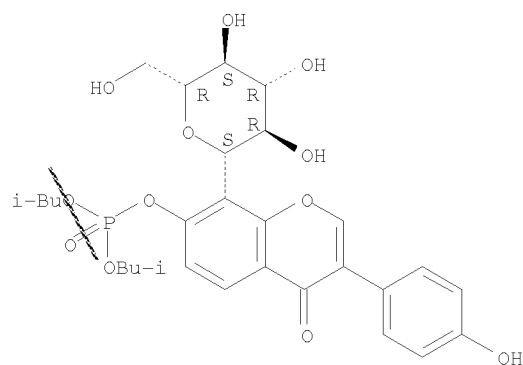
Absolute stereochemistry.



RN 1031331-00-6 CAPLUS

CN Phosphoric acid, 8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl bis(2-methylpropyl) ester (CA INDEX NAME)

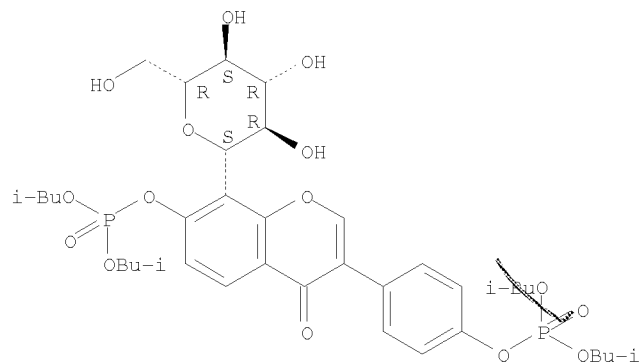
Absolute stereochemistry.



RN 1031331-02-8 CAPLUS

CN Phosphoric acid, 4-[7-[[bis(2-methylpropoxy)phosphinyl]oxy]-8- $\beta$ -D-glucopyranosyl-4-oxo-4H-1-benzopyran-3-yl]phenyl bis(2-methylpropyl) ester (CA INDEX NAME)

Absolute stereochemistry.



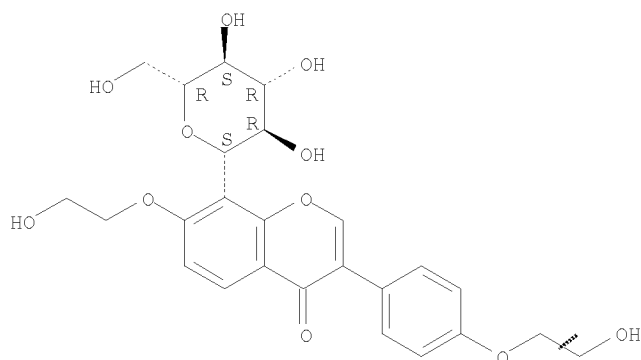
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD

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## ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 13 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 2007:852415 CAPLUS  
 DN 147:480075  
 TI Effects of hydroxyethylpuerarin on levels of NO and NOS in rats with  
 ischemia-reperfusion injury  
 AU Wang, Ziyang; Wei, Xinbing; Sun, Ru; Sun, Xia; Zhang, Xiumei; Zhong, Ying;  
 Zuo, Chunxu  
 CS School of Medicine, Shandong University, Jinan, Shandong Province, 250012,  
 Peop. Rep. China  
 SO Zhongguo Yaoxue Zazhi (Beijing, China) (2006), 41(2), 112-114  
 CODEN: ZYZAEU; ISSN: 1001-2494  
 PB Zhongguo Yaoxue Zazhishe  
 DT Journal  
 LA Chinese  
 AB The effects of hydroxyethylpuerarin on NO and NOS in rats with focal brain  
 ischemia-reperfusion injury were investigated. Rats were divided into 6  
 groups randomly, sham-operate group, ischemia-reperfusion group,  
 nimodipine 0.4 mg/kg-1/d-1 group and hydroxyethylpuerarin 30, 60, 120  
 mg/kg-1/d-1 groups. Rats were prepared with focal brain ischemic injury by  
 middle cerebral artery occlusion (MCAO), and then recovered perfusion by  
 pulling out the suture after 1 h. Rats were treated with medicine at 30  
 min before and 1, 24, and 36 h after operation. Tissue from the forebrain  
 was homogenized 48 h after reperfusion, and NO and nitric oxide synthase  
 (NOS), including total NOS and inducible nitric oxide synthase (iNOS) were  
 determined NO and NOS levels were significantly increased in the brain tissue  
 of ischemia-reperfusion group compared with sham-operate group. While  
 being compared with ischemia-reperfusion group, NO and NOS levels were  
 significantly decreased in the three hydroxyethylpuerarin-treated groups.  
 Hydroxyethylpuerarin can reduce ischemia-reperfusion injury through  
 decreasing the damages of NO.  
 IT 240131-05-9, Hydroxyethylpuerarin  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (effects of hydroxyethylpuerarin on levels of NO and NOS in rats with  
 ischemia-reperfusion injury)  
 RN 240131-05-9 CAPLUS  
 CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-(2-hydroxyethoxy)-3-[4-  
 (2-hydroxyethoxy)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 14 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 2007:723273 CAPLUS  
 DN 147:197605  
 TI Studies on chemical constituents of *Patrinia villosa*  
 AU Peng, Jinyong; Fan, Guorong; Wu, Yutian  
 CS College of Pharmacy, Second Military Medical University, Shanghai, 200433,  
 Peop. Rep. China  
 SO Zhongguo Zhongyao Zazhi (2006), 31(2), 128-130  
 CODEN: ZZZAE3; ISSN: 1001-5302  
 PB Zhongguo Zhongyao Zazhishe  
 DT Journal

LA Chinese

AB The objective of this study is to investigate the chemical constituents of *Patrinia villosa*. The chemical constituents were isolated by silica gel column chromatog. and semi-preparative high-performance liquid chromatog., and identified by physicochem. properties and spectral anal.(MS, <sup>1</sup>H- NMR and <sup>13</sup>C-NMR). Seven compds. were isolated from Et acetate and n-butanol extract and identified as: 5-hydroxyl-7, 3',4'-trimethoxy flavone (I), 5-hydroxyl-7, 4'-dimethoxy flavone (II ), luteolin (III), quercetin (IV), isoorientin (V), isovitexin (VI) and 8-C glucosylprunetin (VII ). Compds. I, II, III, V, VI, and VII were obtained from the plant of genus *Patrinia* for the first time, compound IV was separated from *P. villosa* for the first time.

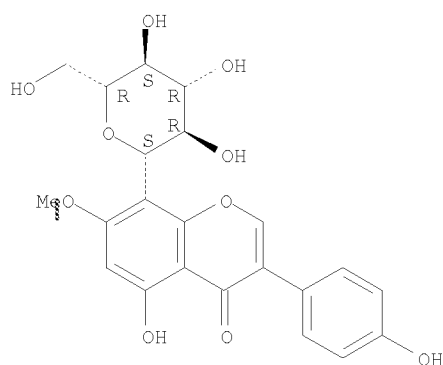
IT 52448-12-1P

RL: PUR (Purification or recovery); PREP (Preparation)  
(studies on chemical constituents of *Patrinia villosa*)

RN 52448-12-1 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-5-hydroxy-3-(4-hydroxyphenyl)-7-methoxy- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 15 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2007:723016 CAPLUS

DN 147:181221

TI Protective effects of hydroxyethylpuerarin against brain astrocytes injury induced by hydrogen peroxide

AU Zhang, Bin; Wei, Xinbing; Liu, Huiqing; Wang, Lixiang; Sun, Ru; Zhang, Xiumei

CS Institute of Pharmacology, School of Medicine, Shandong University, Jinan, 250012, Peop. Rep. China

SO Yaoxue Xuebao (2006), 41(2), 171-174  
CODEN: YHHPAL; ISSN: 0513-4870

PB Yaoxue Xuebao Bianjibu

DT Journal

LA Chinese

AB The objective is to study the protective effects of hydroxyethylpuerarin against the injury of astrocytes induced by hydrogen peroxide(H<sub>2</sub>O<sub>2</sub>). Expts. were performed with cells from passage 4. Plasma membrane integrity was measured by lactate dehydrogenase(LDH) release. The occurrence of apoptosis was measured by flow cytometry. The glutamate uptake of astrocytes was studied with [<sup>3</sup>H]-glutamate incorporation. Intracellular superoxide dismutase(SOD) activity and malondialdehyde level were assessed by automatic biochem. analyzer. Compared with H<sub>2</sub>O<sub>2</sub> injured group, the occurrence of apoptosis, levels of LDH release and intracellular MDA of astrocytes reduced in hydroxyethylpuerarin pre-treated groups, but the glutamate up take and intracellular SOD activity of astrocytes increased. Hydroxyethylpuerarin could reduce the occurrence of apoptosis and improve neurotrophic function of astrocytes, which may be related with its antioxidant effects during oxidative stress.

IT 240131-05-9, Hydroxyethylpuerarin

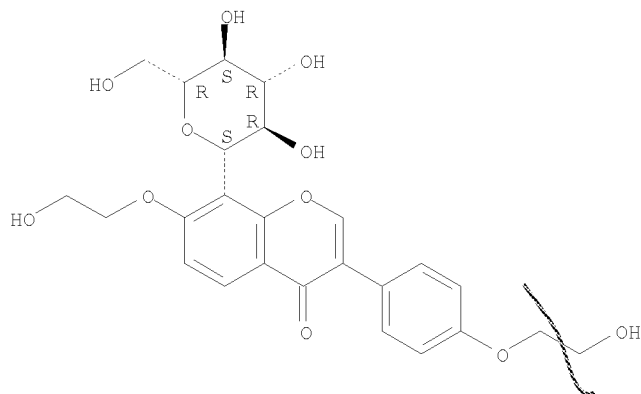
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(protective effects of hydroxyethylpuerarin against brain astrocytes injury induced by hydrogen peroxide)

10/563,471

RN 240131-05-9 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-(2-hydroxyethoxy)-3-[4-(2-hydroxyethoxy)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 16 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2007:591008 CAPLUS

DN 147:95471

TI Method for preparation of lactyl puerarin derivatives

IN Huo, Danqun; Hou, Changjun; Shu, Mao

PA Chongqing University, Peop. Rep. China

SO Faming Zhuanli Shengqing Gongkai Shuomingshu, 13pp.

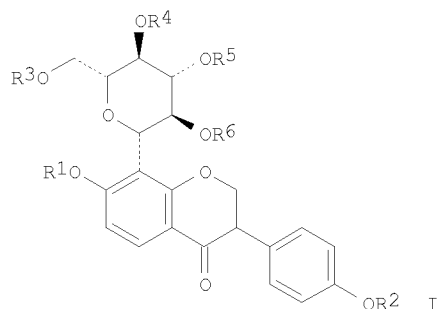
CODEN: CNXXEV

DT Patent

LA Chinese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1970558	A	20070530	CN 2006-10095262	20061207
PRAI	CN 2006-10095262		20061207		
OS	CASREACT 147:95471; MARPAT 147:95471				
GI					



AB The claimed lactyl puerarin derivs. have a general formula I (R1,R2,R3,R4,R5,R6 = H or lactyl, and at least one lactyl exist). Claimed lactyl puerarin derivs. were prepared from lactic acid and thionyl chloride to obtain lactyl chloride, then esterification with puerarin in a basic solvent (such as anhydrous pyridine, tetrahydropyridine, triethylamine and DMF) to provide the products. The method is environment-friendly, and has the advantages of simple operation, high yield (greater than 55%), simple product purification, recoverable solvents, and low manufacturing cost.

IT 905916-27-0P

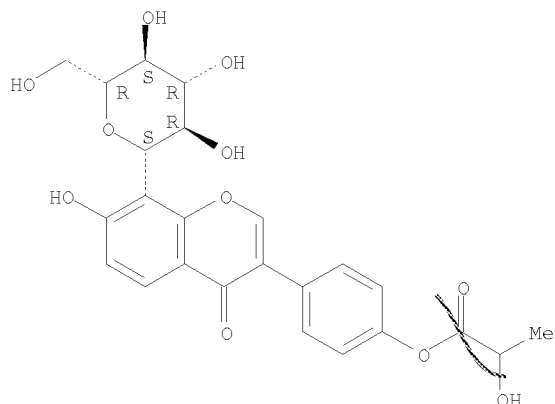
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of lactyl puerarin derivs. via esterification of puerarin with lactyl chloride)

McIntosh

10/563,471

RN 905916-27-0 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-[4-(2-hydroxy-1-oxopropoxy)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.

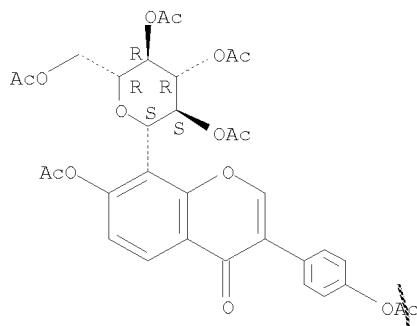


L9 ANSWER 17 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2007:447975 CAPLUS  
DN 147:87267  
TI Effects of acetylpuerarin on hippocampal neurons and intracellular free calcium subjected to oxygen-glucose deprivation/reperfusion in primary culture  
AU Liu, Rui; Wei, Xin-Bing; Zhang, Xiu-Mei  
CS Department of Pharmacology, School of Medicine, Shandong University, Shandong, 250012, Peop. Rep. China  
SO Brain Research (2007), 1147, 95-104  
CODEN: BRREAP; ISSN: 0006-8993  
PB Elsevier Ltd.  
DT Journal  
LA English  
AB This study was undertaken to find out the effects of acetylpuerarin on hippocampal neurons and intracellular free calcium in primary culture subjected to oxygen-glucose deprivation/reperfusion. According to different reperfusion time (1 h, 6 h, 12 h, 24 h), three concns. (1.6  $\mu$ mol l<sup>-1</sup>, 0.4  $\mu$ mol l<sup>-1</sup>, 0.1  $\mu$ mol l<sup>-1</sup>) of acetylpuerarin, and MK-801 (10  $\mu$ mol l<sup>-1</sup>), a pos. control drug, neurons were randomly divided into 21 groups. Each group was observed by inverted phase contrast microscope; neuron viability was measured by the reduction of 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT); intracellular Ca<sup>2+</sup> was observed by Fura-2/AM ester through fluorospectrophotometer. The injured neurons were protected and degeneration and necrosis were alleviated in treatment groups of acetylpuerarin and MK-801. Acetylpuerarin increased the neuron viability at high, middle and low concns. Fluorescence detection results showed that the calcium concentration in the group treated with acetylpuerarin and MK-801 was lowered in each reperfusion time. Our results demonstrated that acetylpuerarin could protect the hippocampal neurons from ischemia-reperfusion injury in rats by alleviating the morphol. damage, increasing neuron viability and decreasing calcium concentration in neuron.  
IT 2889-07-8  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(effects of acetylpuerarin on hippocampal neurons and intracellular free calcium subjected to oxygen-glucose deprivation/reperfusion in primary culture)  
RN 2889-07-8 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[4-(acetyloxy)phenyl]-8-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

Absolute stereochemistry.

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RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 18 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2007:416242 CAPLUS  
DN 146:475689  
TI Method for manufacturing composition for treating cardiovascular and  
cerebrovascular diseases  
IN Chen, Dihua; Du, Lijun; Si, Jianyong; Chang, Qi; You, Baocheng; Ma, Nan;  
Lu, Zhenmin; Pan, Xueqing; Yang, Lin; Sun, Baohua  
PA Institute of Medicinal Plant Development, Chinese Academy of Medical  
Sciences, Peop. Rep. China; Anhui Gujing Group Jiufang Pharmaceutical Co.,  
Ltd.  
SO Faming Zhuanli Shengqing Gongkai Shuomingshu, 22pp.  
CODEN: CNXXEV  
DT Patent  
LA Chinese  
FAN.CNT 1

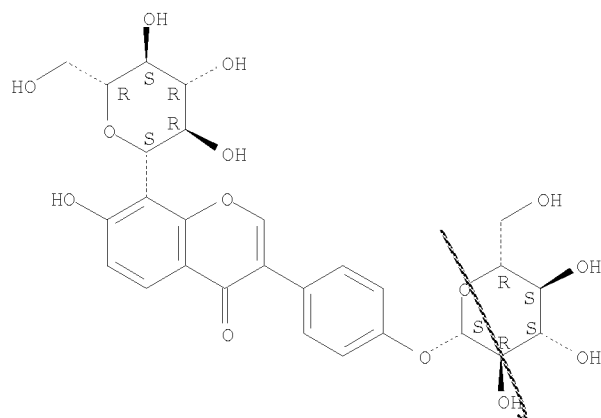
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1943584	A	20070411	CN 2006-10113893	20061020
PRAI	CN 2006-10113893		20061020		

AB The title composition is composed of (by weight parts) formononetin-7-O-glucoside 4.5-5.5, daidzin 6.7-8.2, 3'-methoxyl puerarin 4.5-5.5, puerarin 44-54, glucoside B of Radix Puerariae 1.8-2.2, daidzein-8-C-apiosyl-(1-6)-glucoside 17-21, puerarin xyloside 2.7-3.3, daidzein-7,4'-diglucoside 0.9-1.3, 3'-hydroxy puerarin 4.5-5.5, puerarin-4'-O-glucoside 3-3.7, quercetin-4'-O-glucoside 0.4-0.5, 4'-methoxyl genistin 0.9-1.0, and glucoside C of Radix Puerariae 0.9-1.3. The composition can be used for inhibiting platelet aggregation, lowering blood viscosity, activating fibrinolysin, and inhibiting thrombosis.

IT 117047-08-2P  
RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(method for manufacturing composition for treating cardiovascular and cerebrovascular diseases)

RN 117047-08-2 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-3-[4-( $\beta$ -D-glucopyranosyloxy)phenyl]-7-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 19 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 2007:416144 CAPLUS  
 DN 146:448275  
 TI Puerarin derivatives and its medicinal application  
 IN Feng, Zhiqiang; Guo, Zongru; Chu, Fengming; Sun, Piaoyang; Zhou, Yunshu;  
 Yuan, Kaihong  
 PA Institute of Materia Medica, Chinese Academy of Medical Sciences, Peop.  
 Rep. China; Jiangsu Hengrui Medicine Co., Ltd.  
 SO Faming Zhuanli Shengqing Gongkai Shuomingshu, 24pp.  
 CODEN: CNXXEV  
 DT Patent  
 LA Chinese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1944448	A	20070411	CN 2006-10000814	20060111
PRAI	CN 2005-10000423	A	20050111		

AB The invention discloses puerarin derivs. represented in a general formula, its preparation method, medicinal combination containing one or more of such compds., and application of such compds. in preparing drugs related to heart and brain circulation diseases, as well as retinal arteriovenous occlusion, sudden deafness and other diseases and improving memory, and lowering blood sugar.

IT 934696-09-0P 934696-10-3P 934696-11-4P  
 934696-12-5P 934696-13-6P 934696-15-8P  
 934696-17-0P 934696-20-5P 934696-21-6P  
 934696-25-0P 934696-26-1P

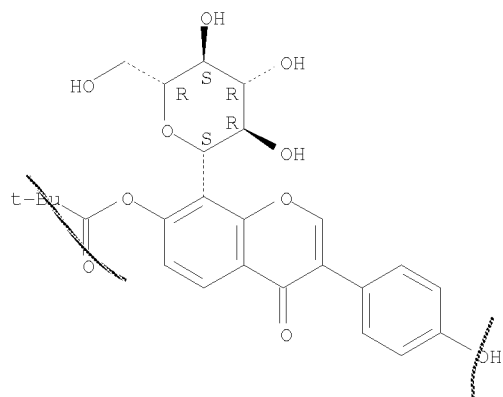
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (puerarin derivs. and its medicinal application)

RN 934696-09-0 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 8-β-D-glucopyranosyl-3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl ester (CA INDEX NAME)

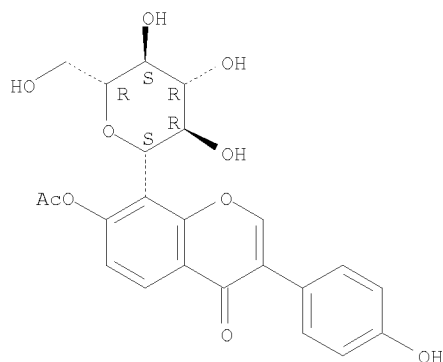
Absolute stereochemistry.

10/563,471



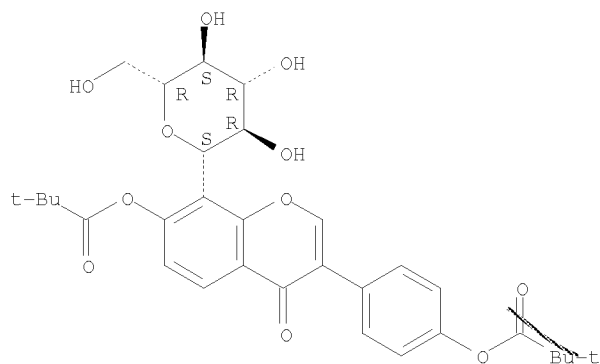
RN 934696-10-3 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.



RN 934696-11-4 CAPLUS  
CN Propanoic acid, 2,2-dimethyl-, 4-[7-(2,2-dimethyl-1-oxopropoxy)-8- $\beta$ -D-glucopyranosyl-4-oxo-4H-1-benzopyran-3-yl]phenyl ester (CA INDEX NAME)

Absolute stereochemistry.

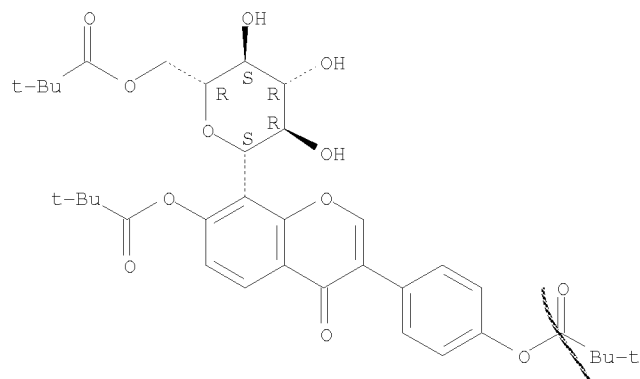


RN 934696-12-5 CAPLUS  
CN Propanoic acid, 2,2-dimethyl-, 4-[7-(2,2-dimethyl-1-oxopropoxy)-8-[6-O-(2,2-dimethyl-1-oxopropyl)- $\beta$ -D-glucopyranosyl]-4-oxo-4H-1-benzopyran-3-yl]phenyl ester (CA INDEX NAME)

Absolute stereochemistry.

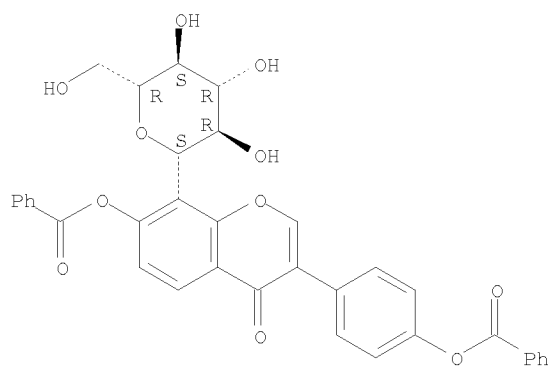
McIntosh

10/563,471



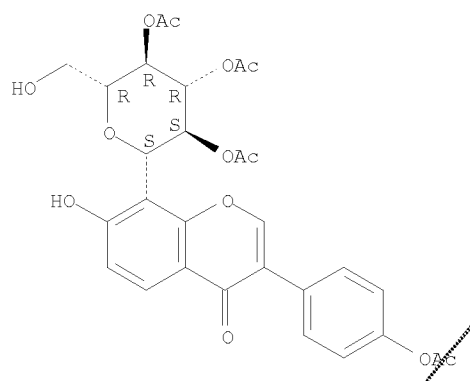
RN 934696-13-6 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-(benzoyloxy)-3-[4-(benzoyloxy)phenyl]-8- $\beta$ -D-glucopyranosyl- (CA INDEX NAME)

Absolute stereochemistry.



RN 934696-15-8 CAPLUS  
CN 4H-1-Benzopyran-4-one, 3-[4-(acetyloxy)phenyl]-7-hydroxy-8-(2,3,4-tri-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

Absolute stereochemistry.

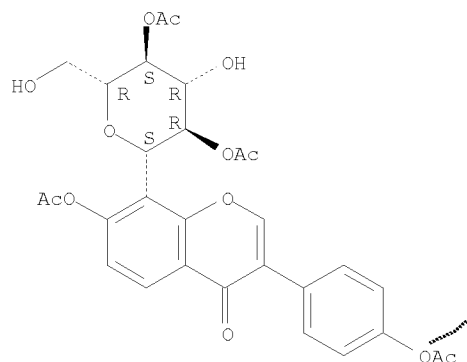


RN 934696-17-0 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[4-(acetyloxy)phenyl]-8-(2,4-di-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

Absolute stereochemistry.

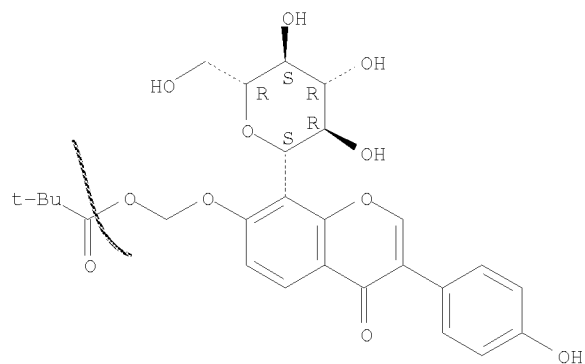
McIntosh

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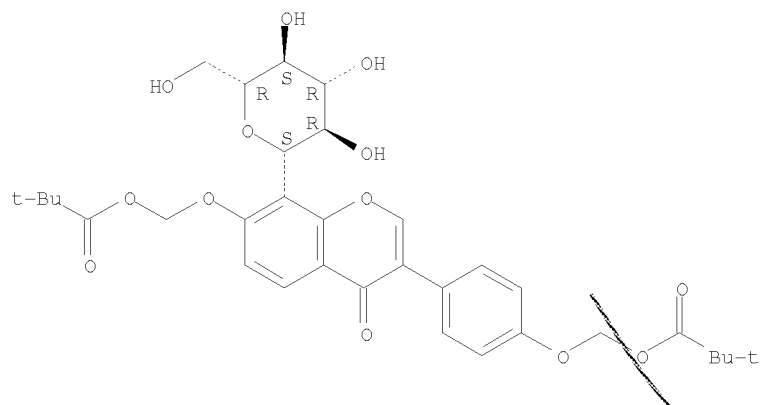
RN 934696-20-5 CAPLUS  
CN Propanoic acid, 2,2-dimethyl-, [[8-β-D-glucopyranosyl-3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]methyl ester (CA INDEX NAME)

Absolute stereochemistry.



RN 934696-21-6 CAPLUS  
CN Propanoic acid, 2,2-dimethyl-, [4-[7-[(2,2-dimethyl-1-oxopropoxy)methoxy]-8-β-D-glucopyranosyl-4-oxo-4H-1-benzopyran-3-yl]phenoxy]methyl ester (CA INDEX NAME)

Absolute stereochemistry.

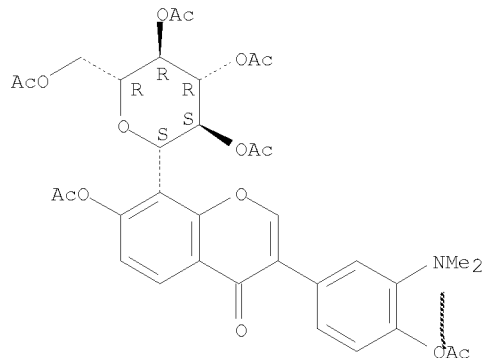


RN 934696-25-0 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[4-(acetyloxy)-3-(dimethylamino)phenyl]-8-(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)- (CA INDEX NAME)

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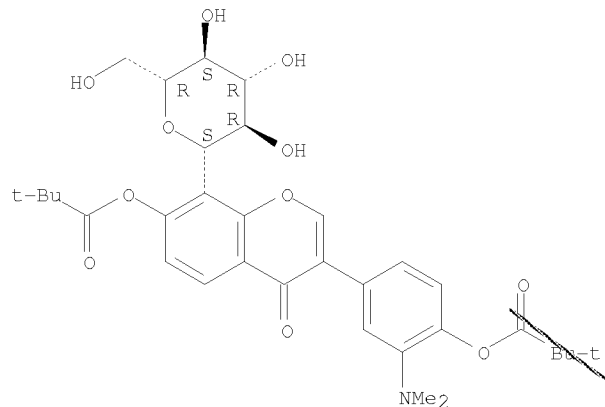
Absolute stereochemistry.



RN 934696-26-1 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-(dimethylamino)-4-[7-(2,2-dimethyl-1-oxopropoxy)-8- $\beta$ -D-glucopyranosyl-4-oxo-4H-1-benzopyran-3-yl]phenyl ester (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 20 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2007:211423 CAPLUS

DN 146:434929

TI Flavonoids Possess Neuroprotective Effects on Cultured Pheochromocytoma PC12 Cells: A Comparison of Different Flavonoids in Activating Estrogenic Effect and in Preventing  $\beta$ -Amyloid-Induced Cell Death

AU Zhu, Judy T. T.; Choi, Roy C. Y.; Chu, Glanice K. Y.; Cheung, Anna W. H.; Gao, Qiu T.; Li, Jun; Jiang, Zhi Y.; Dong, Tina T. X.; Tsim, Karl W. K.

CS Departments of Biology and Center for Chinese Medicine, The Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong, Peop. Rep. China

SO Journal of Agricultural and Food Chemistry (2007), 55(6), 2438-2445  
CODEN: JAFCAU; ISSN: 0021-8561

PB American Chemical Society

DT Journal

LA English

AB Despite the classical hormonal effect, estrogen possesses a neuroprotective effect in the brain, which has led many to search for novel treatments for neurodegenerative diseases. Flavonoids, a group of compds. mainly derived from vegetables, share a resemblance, chemical, to estrogen, and indeed, some have been used as estrogen substitutes. To search for potential therapeutic agents against neurodegenerative diseases, different subclasses of flavonoids were analyzed and compared with estrogen. First, the estrogenic activities of these flavonoids were determined by activating the estrogen-responsive elements in cultured MCF-7

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breast cancer cells. Second, the neuroprotective effects of flavonoids were revealed by measuring its inhibition effects on the formation of reactive oxygen species, the aggregation of  $\beta$ -amyloid, and the induction of cell death by  $\beta$ -amyloid in cultured neuronal PC12 cells. Among these flavonoids, baicalein, scutellarin, hibifolin, and quercetin-3'-glucoside possessed the strongest effect in neuroprotection; however, the neuroprotective activity did not directly correlate with the estrogenic activity of the flavonoids. Identification of these flavonoids could be very useful in finding potential drugs, or food supplements, for treating Alzheimer's disease.

IT 69655-50-1 905916-24-7

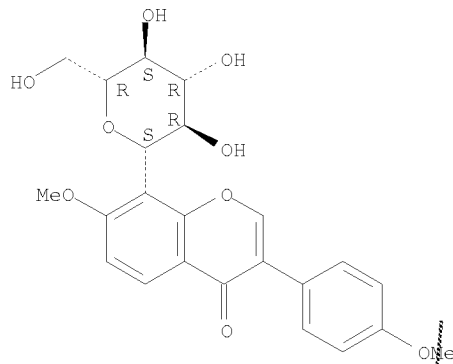
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(flavonoids possess neuroprotective effects on cultured pheochromocytoma PC12 cells and comparison of different flavonoids in activating estrogenic effect and in preventing  $\beta$ -amyloid-induced cell death)

RN 69655-50-1 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-methoxy-3-(4-methoxyphenyl)- (CA INDEX NAME)

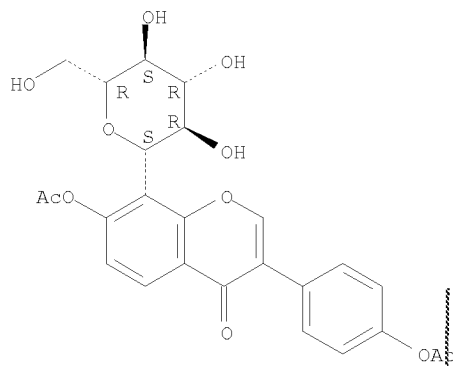
Absolute stereochemistry.



RN 905916-24-7 CAPLUS

CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[4-(acetyloxy)phenyl]-8- $\beta$ -D-glucopyranosyl- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 21 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

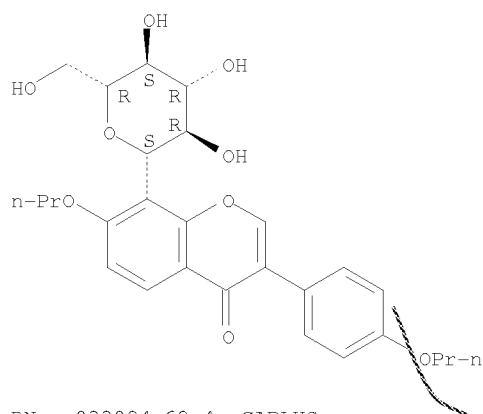
AN 2007:165340 CAPLUS

DN 146:400737

TI Puerarin and Conjugate Bases as Radical Scavengers and Antioxidants:  
Molecular Mechanism and Synergism with  $\beta$ -Carotene

AU Han, Rui-Min; Tian, Yu-Xi; Becker, Eleonora Miquel; Andersen, Mogens L.;  
 Zhang, Jian-Ping; Skibsted, Leif H.  
 CS Department of Chemistry, Renmin University of China, Beijing, 100872,  
 Peop. Rep. China  
 SO Journal of Agricultural and Food Chemistry (2007), 55(6), 2384-2391  
 CODEN: JAFCAU; ISSN: 0021-8561  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB The 4'-hydroxyl group of puerarin, a C-glycoside of the isoflavonoid  
 daidzein, was shown, using 2,2'-azino-bis(3-ethylbenzthiazoline-6-sulfonic  
 acid) radical cation and stopped-flow spectroscopy and by comparison with  
 the 7-propylpuerarin (A ring derivative) and 4'-propylpuerarin (B ring  
 derivative), to be a more efficient radical scavenger as compared to the  
 7-hydroxyl group by a factor of 2, a difference increasing upon  
 deprotonation. The difference in radical scavenging agreed with the  
 oxidation potentials (cyclic voltammetry in acetonitrile, 0.1 M Bu<sub>4</sub>NBF<sub>4</sub> at 25  
 °C): E/mV = 862 ± 3 for puerarin, 905 ± 10 for  
 7-propylpuerarin, and 1064 ± 2 for 4'-propylpuerarin relative to  
 ferrocene/ferricenium. In aqueous solution, the reduction potential was shown to  
 decrease for increasing pH, and deprotonation of the 4'-hydroxyl group  
 increased radical scavenging more than deprotonation of the 7-hydroxyl  
 group. The 7-hydroxyl was found to be more acidic (pK<sub>a1</sub> = 7.20 ± 0.01  
 in puerarin and pK<sub>a</sub> = 7.23 ± 0.01 in 4'-propylpuerarin) than the  
 4'-hydroxyl group (pK<sub>a2</sub> = 9.84 ± 0.08 in puerarin and pK<sub>a</sub> = 9.51 ±  
 0.02 in 7-propylpuerarin); aqueous solution, ionic strength of 0.1, and 25  
 °C. In phosphatidyl choline liposome of pH 7.4, puerarin and  
 β-carotene each showed a modest antioxidant activity measured as  
 prolongation of the lag phase for formation of conjugate dienes and using  
 the water-soluble radical initiator APPH with effects of puerarin and  
 β-carotene being additive. For the lipophilic initiator AMVN, the  
 antioxidative effect decreased for puerarin and increased for  
 β-carotene as compared to APPH and showed a clear synergism. A  
 regeneration of β-carotene, effective in the liposome lipid phase as  
 antioxidant, from the cation radical by deprotonated forms of puerarin was  
 demonstrated in 9:1 chloroform/methanol using laser flash photolysis with  
 k<sub>2</sub> = 2.7 × 10<sup>4</sup> L mol<sup>-1</sup> s<sup>-1</sup> for the bimol. process between the cation  
 radical and the puerarin dianion.  
 IT 623900-91-4 933984-62-4 933984-63-5  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (puerarin and conjugate bases as radical scavengers and antioxidants as  
 to mol. mechanism and synergism with β-carotene)  
 RN 623900-91-4 CAPLUS  
 CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-propoxy-3-(4-  
 propoxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.

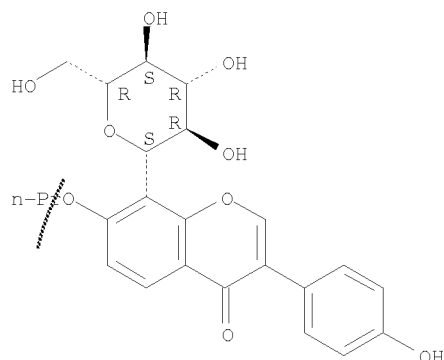


RN 933984-62-4 CAPLUS  
 CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-3-(4-hydroxyphenyl)-7-  
 propoxy- (CA INDEX NAME)

Absolute stereochemistry.

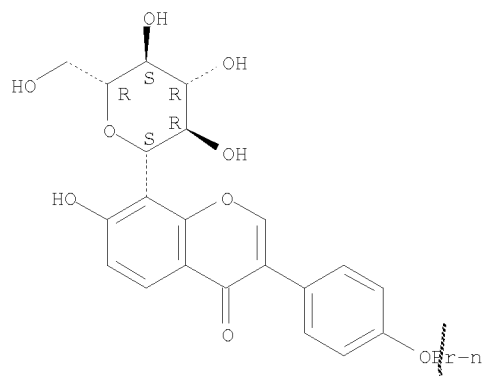


10/563,471



RN 933984-63-5 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-(4-propoxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.



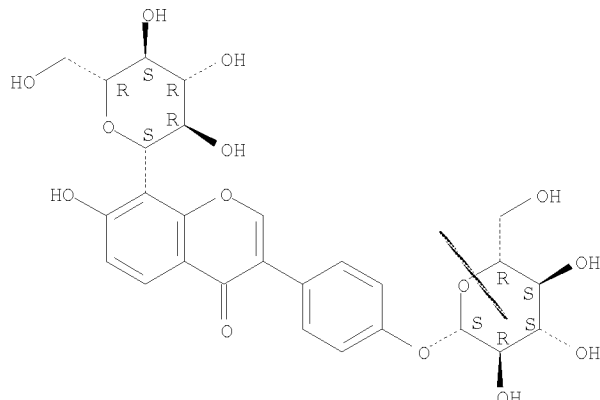
RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 22 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2007:124524 CAPLUS  
DN 147:207675  
TI Chemical constituents from Pueraria lobata  
AU Si, Jian-yong; Chang, Qi; Shen, Lian-gang; Chen, Di-hua  
CS Institute of Medicinal Plant Development, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, 100094, Peop. Rep. China  
SO Journal of Chinese Pharmaceutical Sciences (2006), 15(4), 248-250  
CODEN: JCHSE4; ISSN: 1003-1057  
PB Journal of Chinese Pharmaceutical Sciences  
DT Journal  
LA English  
AB The chemical isolation of fourteen compds. from Pueraria lobata and their structures are presented. Such compds. include daidzein, ononin, daidzin, 3'-methoxy puerarin, puerarin, pueroside B, daidzein-8-C-apiosyl-(1-6)-glucoside, 3'-hydroxy-puerarin, puerarinxyloside, daidzein-7, 4'-O-glucoside, puerarin-4'-O-glucoside, mirificin-4'-O-glucoside, sissotorin, and pueroside C.  
IT 117047-08-2P 168035-01-6P, Mirificin-4'-O-glucoside  
RL: BSU (Biological study, unclassified); NPO (Natural product occurrence); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation) (chemical constituents from Pueraria lobata)  
RN 117047-08-2 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-3-[4-( $\beta$ -D-glucopyranosyloxy)phenyl]-7-hydroxy- (CA INDEX NAME)

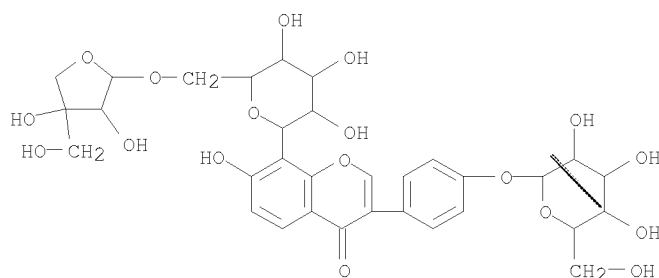
McIntosh

10/563,471

Absolute stereochemistry.



RN 168035-01-6 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8-(6-O-D-apio-β-D-furanosyl-β-D-glucopyranosyl)-3-[4-(β-D-glucopyranosyloxy)phenyl]-7-hydroxy- (CA INDEX NAME)



RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 23 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2006:1202181 CAPLUS  
DN 146:32821  
TI Medicinal composite containing borneol and musk for curing coma, cardiovascular disease, cerebrovascular disease, senile dementia and diabetes  
IN Lin, Yanhe  
PA Shenzhen Biovalley Technologies Co., Ltd., Peop. Rep. China  
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 19pp.  
CODEN: CNXXEV  
DT Patent  
LA Chinese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1857447	A	20061108	CN 2006-10065847	20060327
PRAI	CN 2006-10065847		20060327		

AB The medicinal composite comprises active component 10-90 wt% and adjuvant 90-10 wt%. The active component comprises a) borneol; b) musk or its extract; c) Paeonia albiflora or its extract; d) extract of Salvia miltiorrhiza, or ginkgo biloba, or safflower, puerarin, rhizoma chuanxiong and panax ginseng. The medicinal composite containing borneol and musk is used to cure coma, cardiovascular disease, cerebrovascular disease, senile dementia and diabetes.

IT 24562-39-8, Puerarin diacetate

RL: NPO (Natural product occurrence); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)

(preparation of medicinal composite containing borneol and musk for curing coma,

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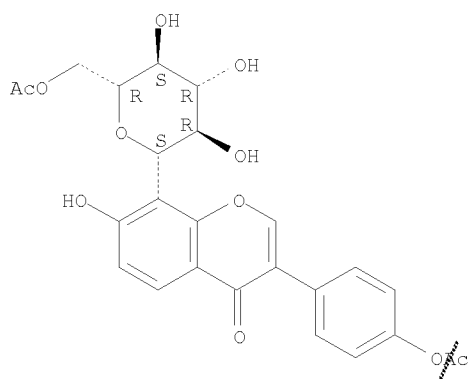
10/563,471

cardiovascular disease, cerebrovascular disease, senile dementia and diabetes)

RN 24562-39-8 CAPLUS

CN 4H-1-Benzopyran-4-one, 8-(6-O-acetyl- $\beta$ -D-glucopyranosyl)-3-[4-(acetyloxy)phenyl]-7-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 24 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:1202175 CAPLUS

DN 146:32925

TI Medicinal composite containing musk for curing coma, cardiovascular disease, cerebrovascular disease, senile dementia and diabetes

IN Lin, Yanhe

PA Shenzhen Biovalley Technologies Co., Ltd., Peop. Rep. China

SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 17pp.

CODEN: CNXXEV

DT Patent

LA Chinese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1857446	A	20061108	CN 2006-10065846	20060327
PRAI	CN 2006-10065846		20060327		

AB The medicinal composite comprises active component 10-90 wt% and adjuvant 90-10 wt%. The active component comprises a) musk or its extract; b) Paeonia albiflora or its extract; c) extract of Salvia miltiorrhiza, or ginkgo biloba, or safflower, puerarin, rhizoma chuanxiong and panax ginseng. The medicinal composite containing borneol and musk is used to cure coma, cardiovascular disease, cerebrovascular disease, senile dementia and diabetes.

IT 24562-39-8, Puerarin diacetate

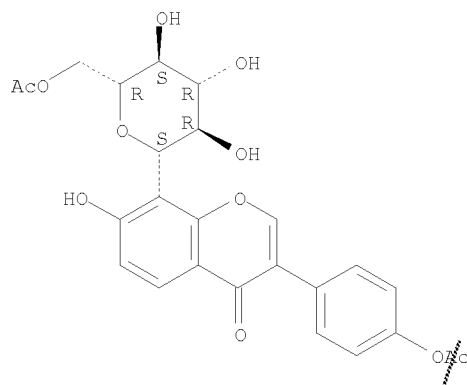
RL: NPO (Natural product occurrence); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)

(preparation of medicinal composite containing musk for curing coma, cardiovascular disease, cerebrovascular disease, senile dementia and diabetes)

RN 24562-39-8 CAPLUS

CN 4H-1-Benzopyran-4-one, 8-(6-O-acetyl- $\beta$ -D-glucopyranosyl)-3-[4-(acetyloxy)phenyl]-7-hydroxy- (CA INDEX NAME)

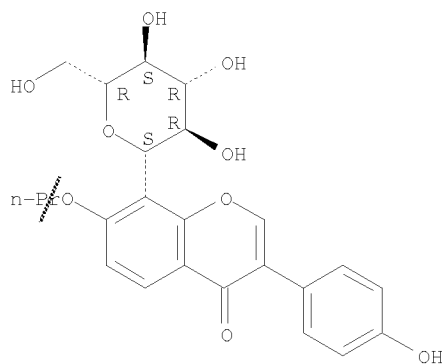
Absolute stereochemistry.



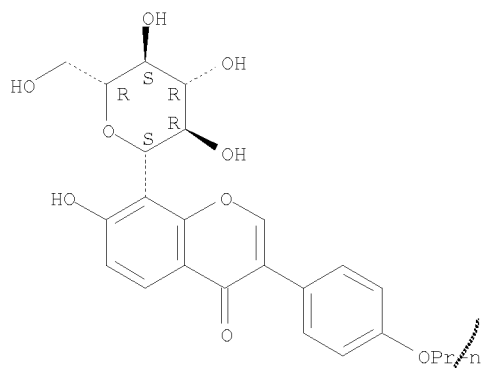
L9 ANSWER 25 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 2006:1038255 CAPLUS  
 DN 147:31285  
 TI Synthesis and characterization of puerarin derivatives and the mechanism of derivation reaction  
 AU Han, Rui-Min; Tian, Yu-Xi; Wang, Peng; Xiang, Jun-Feng; Ai, Xi-Cheng; Zhang, Jian-Ping  
 CS State Key Lab. Structural Chem. of Unstable and Stable Species, Chinese Acad. Sci., Beijing, 100080, Peop. Rep. China  
 SO Gaodeng Xuexiao Huaxue Xuebao (2006), 27(9), 1716-1720  
 CODEN: KTHPDM; ISSN: 0251-0790  
 PB Gaodeng Jiaoyu Chubanshe  
 DT Journal  
 LA Chinese  
 OS CASREACT 147:31285  
 AB 7,4'-Dipropylpuerarin [i.e., 8-(β-D-glucopyranosyl)-7-propoxy-3-(4-propoxyphenyl)-4H-1-benzopyran-4-one] (I), 7-(propyl)puerarin (II) and 4'-(propyl)puerarin (III) were synthesized and characterized by using <sup>1</sup>H NMR, NOESY and HRMS. Among the derivs., II is a new-type of substituted compound of puerarin. <sup>1</sup>H NMR spectroscopic anal. of aromatic protons combined with theor. anal. of mol. structures proved the existence of two rotational isomers at 300 K, as well as a rapid interconversion equilibrium at 330 K for both compds. I and II. However, only one conformer exists for compound III and puerarin containing a 7-phenolic hydroxy group instead of Pr in the A-ring as the case of compds. I and II. Based on UV-Visible absorption data of neutral and basic solns., and on the d. function calcs., the 7-phenolic hydroxy group in the A-ring was found to be more acidic than the 4'-phenolic hydroxyl group in B-ring. The mechanism of derivation reaction and the structure-reactivity relationship of puerarin as an antioxidant were further discussed.  
 IT 623900-91-4P, 7,4'-Dipropylpuerarin 933984-62-4P, 7-Propylpuerarin 933984-63-5P, 4'-Propylpuerarin  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (preparation of (propyl)puerarin derivs., study of properties of their conformers and rotamers and study of their antioxidant structure-activity relationship)  
 RN 623900-91-4 CAPLUS  
 CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-propoxy-3-(4-propoxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.

Absolute stereochemistry.



Absolute stereochemistry.



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10/563,471

Lin, Zhonglian; Chen, Jianqiang; Li, Anguo; Yan, Qinbin; He, Hongping;  
Yang, Min  
PA Shanxi Zhenping Pharmaceutical Factory, Peop. Rep. China  
SO Faming Zhuanli Shengqing Gongkai Shuomingshu, 15pp.  
CODEN: CNXXEV  
DT Patent  
LA Chinese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1823801	A	20060830	CN 2005-10042516	20050225
PRAI	CN 2005-10042516		20050225		

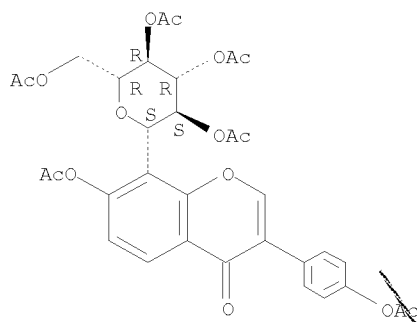
AB Hexaacetylpuerarin is prepared by extracting Pueraria lobata, dissolving the extract in acetic anhydride, and acetylating to obtain a bioactive puerarin derivative (hexaacetylpuerarin). Hexaacetylpuerarin can be used in medicine, especially oral agent, for treating ischemic cerebrovascular diseases.

IT 2889-07-8P, Puerarin, hexaacetate  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(application of hexaacetylpuerarin as medicine for treating ischemic cerebrovascular diseases)

RN 2889-07-8 CAPLUS

CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[4-(acetyloxy)phenyl]-8-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 27 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:907251 CAPLUS

DN 145:342220

TI Medical composition containing borneol for treating cardio-cerebral vascular diseases and diabetes

IN Lin, Yanhe

PA Shenzhen Biovalley Technologies Co., Ltd., Peop. Rep. China

SO Faming Zhuanli Shengqing Gongkai Shuomingshu, 30pp.

CODEN: CNXXEV

DT Patent

LA Chinese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1823922	A	20060830	CN 2005-10132563	20051226
	CN 100391489	C	20080604		
PRAI	CN 2005-10132563		20051226		

AB The title medical composition is composed of active constituent 10-90 and pharmaceutical adjuvant 90-10%, wherein active constituent comprises borneol 1-15, Paeonia root powder or active ingredient thereof 5-85 and/or Salvia miltiorrhiza extract, Erigeron breviscapus or its extract, Carthamus tinctorius extract, isoflavonoid extract, ginkgo extract, Ligusticum chuanxiong extract and/or ginseng extract 15-200 part. The medical composition can be prepared into tablet, soft capsule, dripping pill, oral disintegrating tablet, slow-release tablet, freeze-dried powder for treating coma, cardio-cerebral vascular diseases and diabetes.

IT 303114-83-2

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

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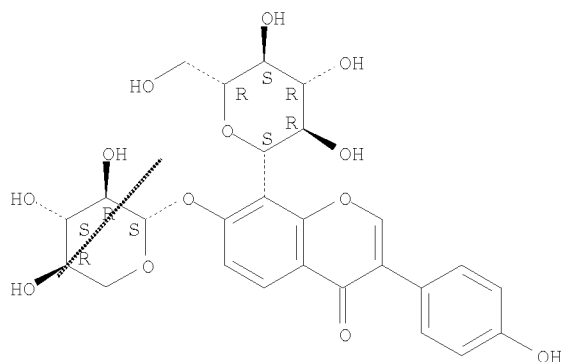
10/563,471

(herbal composition containing borneol for treating cardio- and cerebro-vascular diseases and diabetes)

RN 303114-83-2 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)-7-( $\beta$ -D-xylopyranosyloxy)- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 28 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:695558 CAPLUS

DN 145:249448

TI Preparation of puerarin derivatives as antiischemics

IN Huo, Danqun; Shi, Kaiyun; Hou, Changjun; Shu, Mao

PA Chongqing University, Peop. Rep. China

SO Faming Zhuanli Shenqing Gongkai Shumingshu, 9 pp.

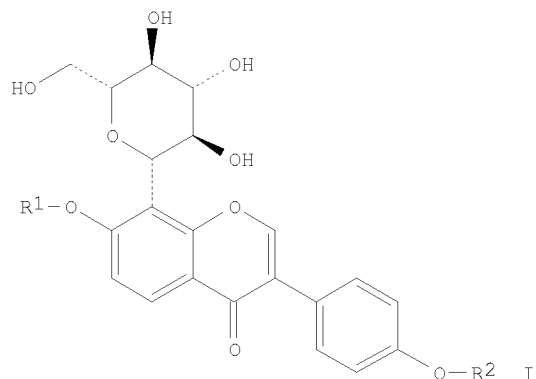
CODEN: CNXXEV

DT Patent

LA Chinese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1800196	A	20060712	CN 2006-10054014	20060110
PRAI	CN 2006-10054014		20060110		
OS	CASREACT 145:249448; MARPAT 145:249448				
GI					



AB The title derivs. I [R1, R2 = H, alkyl, linear or branched alkanoyl or aroyl, or metal (Na, K, Mg, Ca, or Zn) ion with the proviso that R1 and R2 are not H at the same time; and 1-site of D-glucosyl is connected with 8-site of isoflavone by  $\beta$ -configuration] are prepared by butylating puerarin with di-Bu sulfate, di-Bu carbonate, or Bu halide in ketone or alc.; or acylating puerarin with acyl halide in water, haloalkane, ketone or alc. under neutral or weakly basic condition; or reacting puerarin with

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sodium/potassium hydroxide for salifying in ketone, ether or alc. to obtain different puerarin derivs. The inventive derivs. have better resistance to oxygen deficiency, higher water-solubility and/or oil-solubility

IT 905916-20-3P 905916-24-7P 905916-27-0P  
905916-32-7P

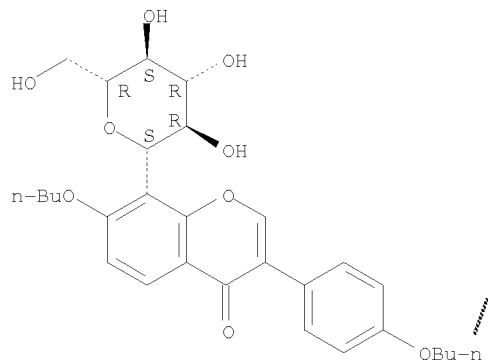
RL: ADV (Adverse effect, including toxicity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of puerarin derivs. as antiischemics)

RN 905916-20-3 CAPLUS

CN 4H-1-Benzopyran-4-one, 7-butoxy-3-(4-butoxyphenyl)-8- $\beta$ -D-glucopyranosyl- (CA INDEX NAME)

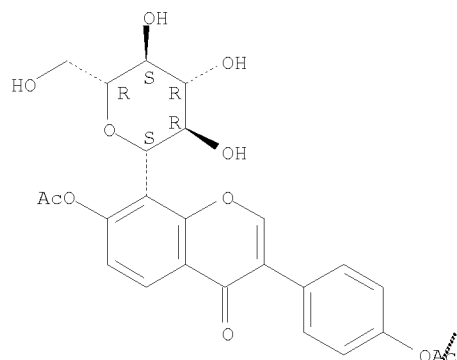
Absolute stereochemistry.



RN 905916-24-7 CAPLUS

CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[4-(acetyloxy)phenyl]-8- $\beta$ -D-glucopyranosyl- (CA INDEX NAME)

Absolute stereochemistry.



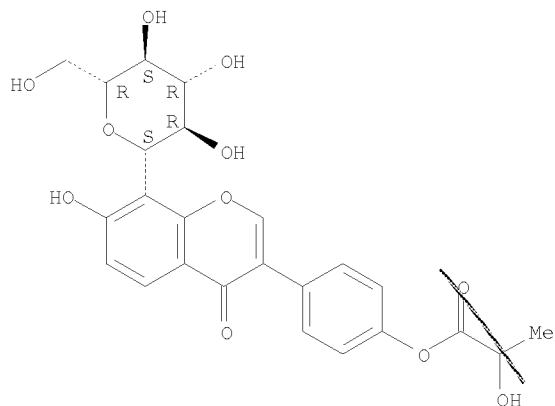
RN 905916-27-0 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-[4-(2-hydroxy-1-oxopropoxy)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.



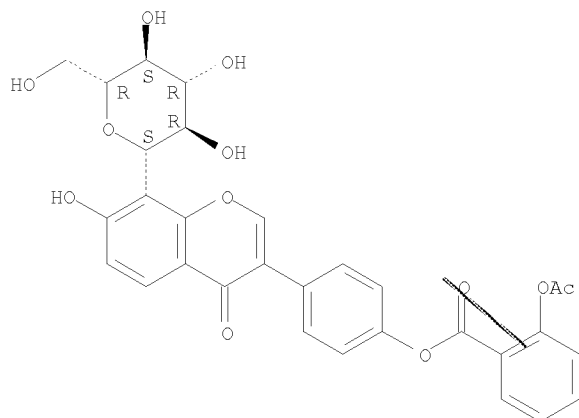
10/563,471



RN 905916-32-7 CAPLUS

CN Benzoic acid, 2-(acetyloxy)-, 4-[8-β-D-glucopyranosyl-7-hydroxy-4-oxo-4H-1-benzopyran-3-yl]phenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 29 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:525663 CAPLUS

DN 145:348396

TI Protective effects of hydroxyethylpuerarin on cultured bovine cerebral microvascular endothelial cells damaged by hydrogen peroxide

AU Guang, Hongmei; Zhang, Xiumei; Li, Yingquan; Wei, Xinbing; Wang, Ziyang; Liu, Huiqing

CS Department of Pharmacology, School of Medicine, Shandong University, Jinan, 250012, Peop. Rep. China

SO Yaoxue Xuebao (2005), 40(3), 220-224

CODEN: YHHPAL; ISSN: 0513-4870

PB Yaoxue Xuebao Bianjibu

DT Journal

LA English

AB The damages induced by H<sub>2</sub>O<sub>2</sub> in cultured bovine cerebral microvascular endothelial cells (BCMEC) were observed and the protective effects of hydroxyethylpuerarin on H<sub>2</sub>O<sub>2</sub>-injured BCMEC were evaluated. BCMECs were cultured and transferred into modified Eagle medium (MEM). The viability of cells was detected by MTT assay. Cell injury was determined by lactate dehydrogenase (LDH) activity in the extracellular medium. Flow cytometry was used to observe the occurrence of apoptosis. Morphol. changes of cells were visualized under phase contrast and electron microscopes. H<sub>2</sub>O<sub>2</sub> (200 μM, for 4 h) inhibited the viability of cultured BCMEC and stimulated LDH release. H<sub>2</sub>O<sub>2</sub> (100 μM, for 4 h) induced the occurrence of apoptosis. Hydroxyethylpuerarin increased the survival rate and decreased the activity of LDH of BCMEC damaged by H<sub>2</sub>O<sub>2</sub>.

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Hydroxyethylpuerarin also protected BCMEC against apoptosis induced by H<sub>2</sub>O<sub>2</sub>. H<sub>2</sub>O<sub>2</sub> induces BCMEC injury either by apoptosis or through necrosis, hydroxyethylpuerarin protects BCMEC against H<sub>2</sub>O<sub>2</sub>-induced injury in a concentration-dependent manner, and its antioxidant effects might be involved as the mechanism protection.

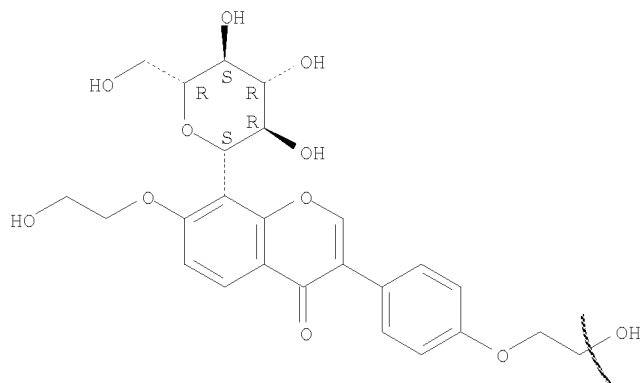
IT 240131-05-9

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(protective effects of hydroxyethylpuerarin on cerebral microvascular endothelial cells)

RN 240131-05-9 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-(2-hydroxyethoxy)-3-[4-(2-hydroxyethoxy)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 30 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:500363 CAPLUS

DN 146:198334

TI Effect of acetylpuerarin on NO level and NOS activity in brain tissue and serum of focal cerebral ischemia reperfusion injury rats

AU Li, Xuemei; Wei, Xinbing; Zhang, Xiumei; Hou, Li; Zhong, Ying; Zuo, Chunxu

CS School of Medicine, Shandong University, Jinan, Shandong Province, 250012, Peop. Rep. China

SO Zhongguo Yaoxue Zazhi (Beijing, China) (2005), 40(11), 829-832

CODEN: ZYZAEU; ISSN: 1001-2494

PB Zhongguo Yaoxue Zazhishe

DT Journal

LA Chinese

AB The neuroprotective effect of acetylpuerarin (compound N-2211) and puerarin on focal cerebral ischemia-reperfusion injury was studied. The nitric oxide (NO) level and nitric oxide synthase (NOS) activity in brain tissue and serum were measured in the rats with reversible middle cerebral artery occlusion (MCAO) without craniectomy. The levels of NO and NOS in brain homogenate increased significantly in ischemia-reperfusion group, compared with sham group, and there was the same change happened for the level of NO in serum ( $P < 0.01$ ). NO and NOS levels in brain tissue and NO in serum decreased in acetylpuerarin-treated groups and puerarin-treated group, compared with ischemia-reperfusion rats ( $P < 0.05$ ). At the same time, the number of living pyramidal cells in CA1 region of hippocampus increased significantly in acetylpuerarin-treated rats and puerarin-treated rats, compared with ischemia-reperfusion rats. The results suggested that the effect of acetylpuerarin and puerarin on decreasing NO production played a role on the amelioration of focal brain ischemia-reperfusion injury.

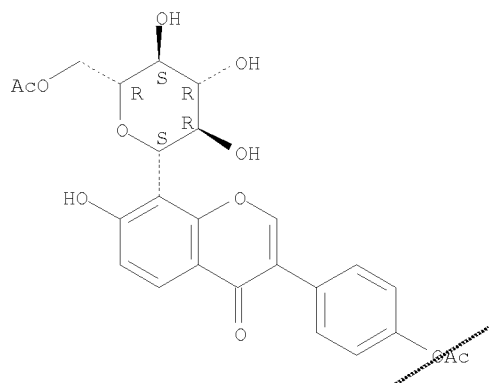
IT 24562-39-8

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(effect of acetylpuerarin on NO and NOS in brain and serum of focal cerebral ischemia reperfusion injury rats)

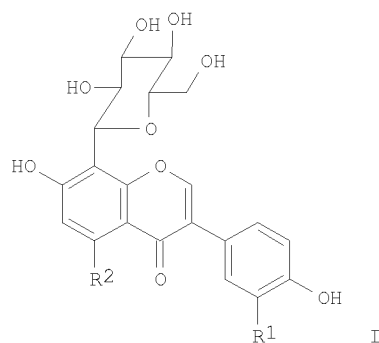
RN 24562-39-8 CAPLUS

CN 4H-1-Benzopyran-4-one, 8-(6-O-acetyl- $\beta$ -D-glucopyranosyl)-3-[4-(acetyloxy)phenyl]-7-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 31 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 2006:478988 CAPLUS  
 DN 145:145938  
 TI Total synthesis of two isoflavone C-glycosides: Genistein and orobol  
 8-C- $\beta$ -D-glucopyranosides  
 AU Sato, Shingo; Hiroe, Kaoru; Kumazawa, Toshihiro; Onodera, Jun-ichi  
 CS Department of Chemistry and Chemical Engineering, Faculty of Engineering,  
 Yamagata University, Yonezawa-shi, Yamagata, 992-8510, Japan  
 SO Carbohydrate Research (2006), 341(9), 1091-1095  
 CODEN: CRBRAT; ISSN: 0008-6215  
 PB Elsevier B.V.  
 DT Journal  
 LA English  
 OS CASREACT 145:145938  
 GI



AB Genistein and orobol 8-C- $\beta$ -D-glucopyranosides I (R1 = H, R2 = OH; R1 = OH, R2 = OH) were synthesized for the first time in overall yields of 39% and 41% from 2,4-di-O-benzylphloroacetophenone (II). Chalcone glycosides were synthesized via aldol condensation of the benzyl-protected C-glycosylphloroacetophenone, a key intermediate, which was synthesized by a C-glycosylation method involving the O $\rightarrow$ C glycoside rearrangement of II in 96% yield. Isoflavone glycosides were formed by the formation of acetals by oxidative rearrangement of the protected chalcones using  $\text{Ti}(\text{NO}_3)_3$ , followed by acid-catalyzed cyclization. Then, debenzilation by hydrogenolysis gave the title compds.  
 IT 898550-59-9P 898550-60-2P 898550-61-3P  
 898550-62-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of genistein and orobol 8-C- $\beta$ -D-glucopyranosides via C-glycosylation, aldol condensation, oxidative rearrangement,

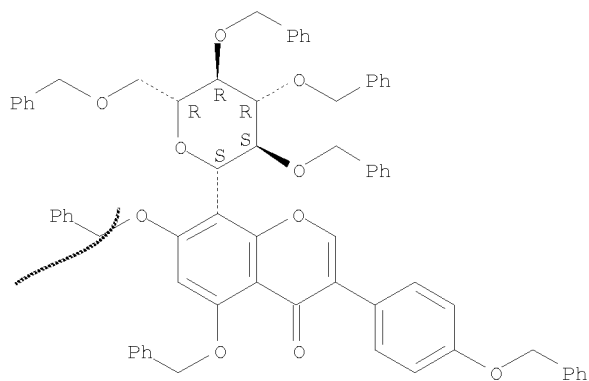
10/563,471

acid-catalyzed cyclization and debenzylation/hydrogenolysis from  
dibenzylphloracetophenone)

RN 898550-59-9 CAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-bis(phenylmethoxy)-3-[4-(phenylmethoxy)phenyl]-  
8-[2,3,4,6-tetrakis-O-(phenylmethyl)- $\beta$ -D-glucopyranosyl]- (CA INDEX  
NAME)

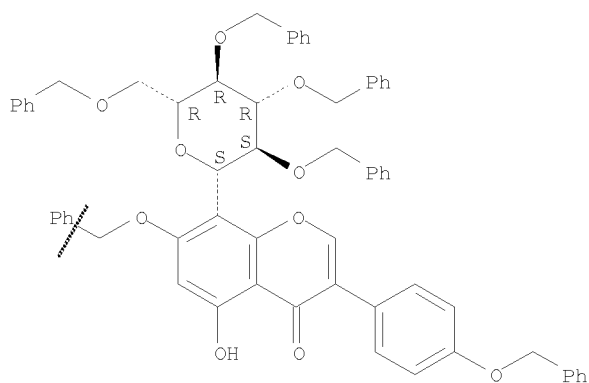
Absolute stereochemistry. Rotation (-).



RN 898550-60-2 CAPLUS

CN 4H-1-Benzopyran-4-one, 5-hydroxy-7-(phenylmethoxy)-3-[4-(phenylmethoxy)phenyl]-8-[2,3,4,6-tetrakis-O-(phenylmethyl)- $\beta$ -D-glucopyranosyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

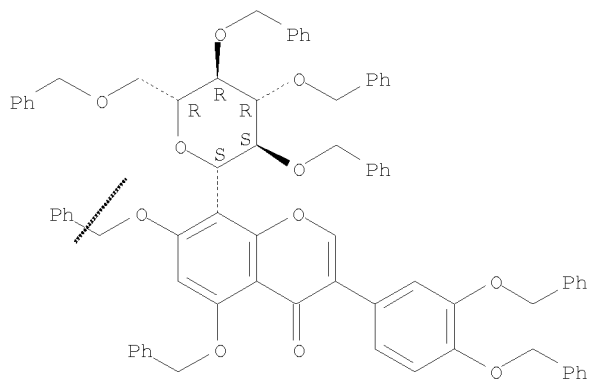


RN 898550-61-3 CAPLUS

CN 4H-1-Benzopyran-4-one, 3-[3,4-bis(phenylmethoxy)phenyl]-5,7-bis(phenylmethoxy)-8-[2,3,4,6-tetrakis-O-(phenylmethyl)- $\beta$ -D-glucopyranosyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

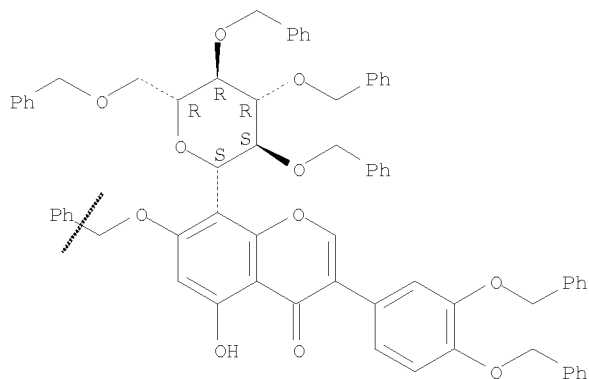
10/563,471



RN 898550-62-4 CAPLUS

CN 4H-1-Benzopyran-4-one, 3-[3,4-bis(phenylmethoxy)phenyl]-5-hydroxy-7-(phenylmethoxy)-8-[2,3,4,6-tetrakis-O-(phenylmethyl)-β-D-glucopyranosyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 32 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:365355 CAPLUS

DN 144:381954

TI Synthesis of acetylated puerarin derivatives for improved bioavailability

IN Chan, Albert Sun-Chi; Chen, Shi Lin; Li, Yueming; Yang, Dajian

PA Hong Kong

SO U.S. Pat. Appl. Publ., 16 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20060084615	A1	20060420	US 2004-969571	20041020
	CN 1763030	A	20060426	CN 2004-10096209	20041125
	WO 2006042454	A1	20060427	WO 2005-CN1676	20051012
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,				

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CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
KG, KZ, MD, RU, TJ, TM

PRAI US 2004-969571 A 20041020

OS CASREACT 144:381954; MARPAT 144:381954

AB The present invention provides acetylated derivs. of the compound puerarin that have enhanced bioavailability and are particularly suitable for oral administration. The present invention also teaches the use of medicaments containing acetylated derivs. of puerarin that are suitable for the treatment of myocardial ischemia and for modulating blood lipid levels, dilating coronary and cerebral arteries, reducing oxygen consumption of cardiomyocytes, improving microcirculation and preventing aggregation of blood platelets.

IT 2889-07-8P 882979-98-8P

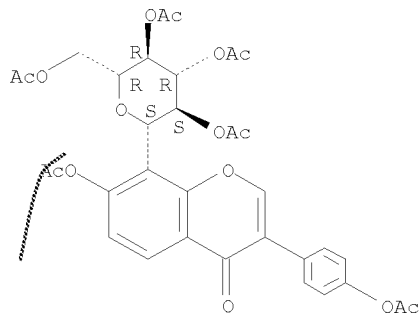
RL: PKT (Pharmacokinetics); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(synthesis of acetylated puerarin derivs. for improved bioavailability)

RN 2889-07-8 CAPLUS

CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[4-(acetyloxy)phenyl]-8-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

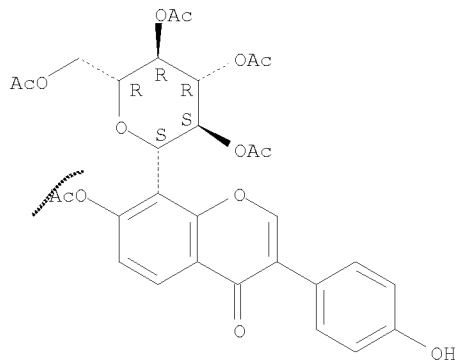
Absolute stereochemistry.



RN 882979-98-8 CAPLUS

CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-(4-hydroxyphenyl)-8-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 33 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:91447 CAPLUS

DN 146:62994

TI A novel conformation investigation on newly synthesized compound of diethyl puerarin-7-yl phosphate

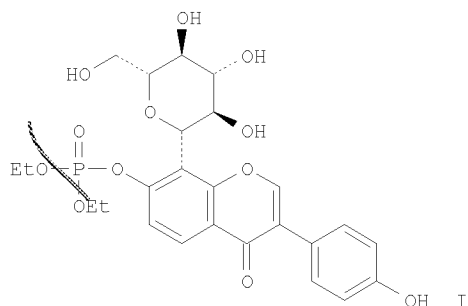
AU Yuan, Jin-Wei; Chen, Xiao-Lan; Qu, Ling-Bo; Tang, Ming-Sheng; Liang, Rui-Ling; Zhao, Yu-Fen

CS Dep. Chem., Key Lab. Chem. Biol., Zhengzhou Univ., Zhengzhou, 450052, Peop. Rep. China

McIntosh

10/563,471

SO Jiegou Huaxue (2006), 25(1), 78-84  
CODEN: JHUADF; ISSN: 0254-5861  
PB Jiegou Huaxue Bianji Weiyuanhui  
DT Journal  
LA English  
OS CASREACT 146:62994  
GI



AB A novel compound, di-Et puerarin-7-yl phosphate I, was synthesized through a simplified Atherton-Todd reaction for the first time. The structure of this compound was elucidated by IR, ESI-MS and NMR. Two conformations of the compound were testified by 2D NMR (HSQC and HMBC) and dynamic NMR. Conformational anal. using chemical calcn. by Gaussian 03 was carried out to obtain two preferred conformations and energy values.

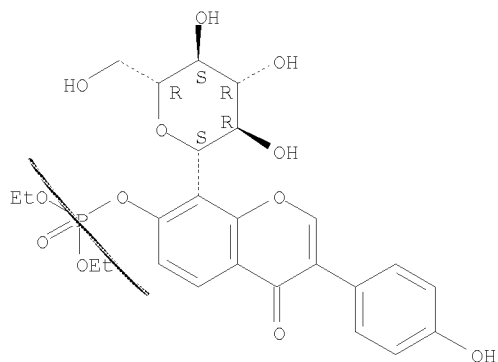
IT 913627-26-6P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(preparation and conformational anal. of di-Et puerarinyl phosphate via simplified Atherton-Todd phosphorylation of puerarin and diethylphosphite)

RN 913627-26-6 CAPLUS

CN 4H-1-Benzopyran-4-one, 7-[(diethoxyphosphinyl)oxy]-8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.



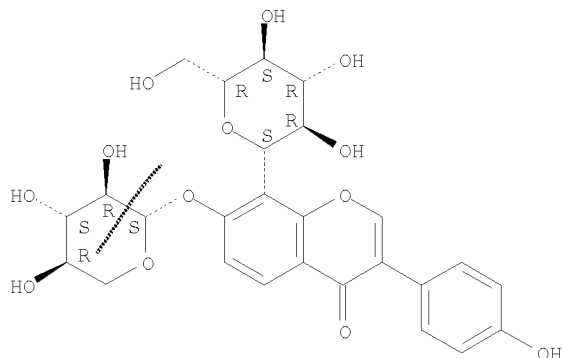
RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 34 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2006:77420 CAPLUS  
DN 145:310513  
TI Studies on chemical constituents of flavone from Puerariae Radix  
AU Liang, Jianwu  
CS Guangdong Light Industry School, Guangzhou, 510308, Peop. Rep. China  
SO Guangdong Huagong (2004), 31(6), 1-4  
CODEN: GHUAFI; ISSN: 1007-1865  
PB Guangdongsheng Zhonghua Gongyeting Xinxi Zhongxin  
DT Journal

McIntosh

LA	Chinese
AB	The chemical constituents of flavone were isolated on polyamide column and determined by multilayer series connection on mass spectrum. Three chemical constituents were isolated from Puerarin Radix by absolute ethanol, e.g., daidzein 7,4'-diglucoside, 7-xylose puerarin and puerarin. Their structures were fit to those in the document.
IT	303114-83-2 RL: BSU (Biological study, unclassified); BIOL (Biological study) (chemical constituents of flavone from Puerariae Radix)
RN	303114-83-2 CAPLUS
CN	4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)-7-( $\beta$ -D-xylopyranosyloxy)- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 35 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2006:53534 CAPLUS  
DN 144:129179  
TI Preparation of acetylsalicyloylpuerarin derivatives as platelet  
aggregation inhibitors  
IN Lou, Hongxiang; Liu, Lijuan; Fan, Peihong  
PA Shandong University, Peop. Rep. China  
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 19 pp.  
CODEN: CNXXEV  
DT Patent  
LA Chinese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1634912	A	20050706	CN 2004-10036070	20041110
	CN 1314677	C	20070509		
PRAI	CN 2004-10036070		20041110		

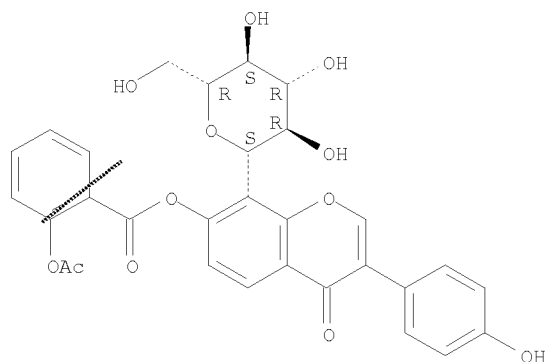
OS	CASREACT 144:129179; MARPAT 144:129179
AB	Title compds. are prepared prepared by chlorinating aspirin with SOCl <sub>2</sub> in pyridine at 60-80° for 2-3 h to obtain salicyloyl chloride; acylating puerarin in alkaline solvent at 20-35° for 1-2 h then refluxing for 2-3 h, and separating on silica gel column. The alkaline solvent is K <sub>2</sub> CO <sub>3</sub> -unsatd. THF. 7-Acetylsalicyloylpuerarin was prepared and showed platelet aggregation inhibitor activity superior to that of aspirin.
IT	873192-72-4P 873192-73-5P 873192-74-6P RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation) (preparation and platelet aggregation inhibitor activity of acetylsalicyloylpuerarin derivs.)
RN	873192-72-4 CAPLUS
CN	Benzoic acid, 2-(acetyloxy)-, 8-β-D-glucopyranosyl-3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl ester (CA INDEX NAME)

Absolute stereochemistry.

McIntosh

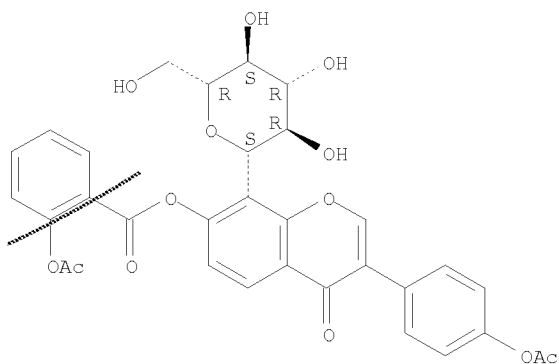


10/563,471



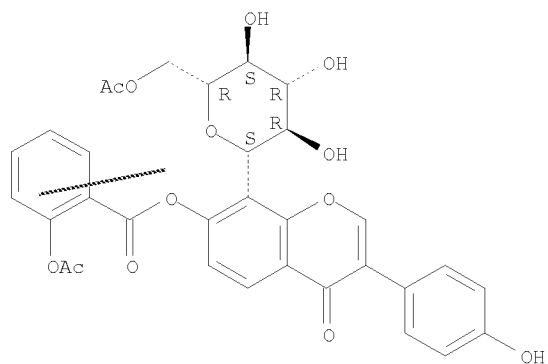
RN 873192-73-5 CAPLUS  
CN Benzoic acid, 2-(acetyloxy)-, 3-[4-(acetyloxy)phenyl]-8- $\beta$ -D-glucopyranosyl-4-oxo-4H-1-benzopyran-7-yl ester (CA INDEX NAME)

Absolute stereochemistry.



RN 873192-74-6 CAPLUS  
CN Benzoic acid, 2-(acetyloxy)-, 8-(6-O-acetyl- $\beta$ -D-glucopyranosyl)-3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl ester (CA INDEX NAME)

Absolute stereochemistry.

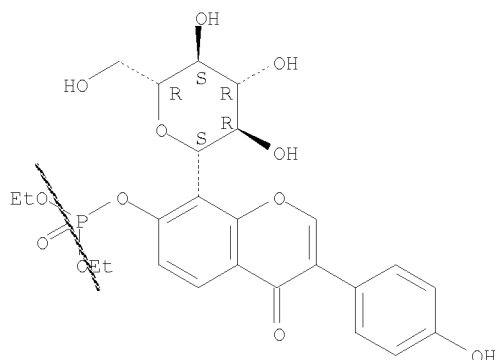


L9 ANSWER 36 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2006:10174 CAPLUS  
DN 145:471276  
TI Synthesis and NMR characterization of diethyl puerarin-7-yl phosphate  
AU Yuan, Jin-wei; Chen, Xiao-lan; Wang, Mao-tian; Qu, Ling-bo; Zhao, Yu-fen  
CS Henan Provincial Key Lab of Bio-Chem. and Organic Chem., Dep. of

McIntosh

Chemistry, Zhengzhou University, Zhengzhou, 45002, Peop. Rep. China  
 SO Bopuxue Zazhi (2005), 22(4), 409-415  
 CODEN: BOZAE2; ISSN: 1000-4556  
 PB Kexue Chubanshe  
 DT Journal  
 LA Chinese  
 OS CASREACT 145:471276  
 AB Puerarin, an isoflavone compound [i.e., 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)-4H-1-benzopyran-4-one] is the bioactive component of traditional Chinese medicine puerarin lobate (wild). A novel di-Et puerarin-7-yl phosphate was synthesized by the Atherton-Todd reaction with high productive yield. It was found that the compound synthesized has two sets of NMR signals at room temperature, suggesting the existence of two conformational isomers in solution. The  $^1\text{H}$  chemical shifts of the compound were assigned using two-dimensional NMR techniques, including  $^1\text{H}$ -detected heteronuclear multiple-quantum coherence and  $^1\text{H}$ -detected multiple-bond heteronuclear multiple-quantum coherence.  
 IT 913627-26-6P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and NMR characterization of di-Et puerarin phosphate (hydroxy isoflavone))  
 RN 913627-26-6 CAPLUS  
 CN 4H-1-Benzopyran-4-one, 7-[(diethoxyphosphinyl)oxy]-8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 37 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 2005:997009 CAPLUS  
 DN 144:208854  
 TI Profiling isoflavone conjugates in root extracts of lupine species with LC/ESI/MSn systems  
 AU Kachlicki, Piotr; Marczak, Lukasz; Kerhoas, Lucien; Einhorn, Jacques; Stobiecki, Maciej  
 CS Institute of Bioorganic Chemistry PAS, Poznan, 61-704, Pol.  
 SO Journal of Mass Spectrometry (2005), 40(8), 1088-1103  
 CODEN: JMSPEJ; ISSN: 1076-5174  
 PB John Wiley & Sons Ltd.  
 DT Journal  
 LA English  
 AB Exts. obtained from roots of three lupine species (*Lupinus albus*, L. *angustifolius*, L. *luteus*) were analyzed using LC/UV and LC/ESI/MSn. The expts. were performed using two mass spectrometric systems, equipped with the triple quadrupole or ion trap analyzers. Thirteen to twenty isomeric isoflavone conjugates were identified in roots of the investigated lupine species. These were di- and monoglycosides of genistein and 2'-hydroxygenistein with different patterns of glycosylation, both at oxygen and carbon atoms; some glycosides were acylated with malonic acid. It was not possible to establish the glycosylation sites of the aglycon only on the basis of the registered mass spectra; however, it was possible to differentiate C- and O-glucosides of isoflavones. Only comparison of retention times with those of standard compds. permitted to indicate the correct glycosylation pattern. In the case of diglycosides, the glycosylation pattern (O-diglycoside or O-glucosylglucoside) was

distinguishable on the basis of the relative intensities of daughter ions in the mass spectra of protonated mol. ions. It was not possible to elucidate the site of malonylation on the sugar moiety from mass spectra, however, protonated mols.  $[M + H]^+$  of isoflavone glucosides with different placement of the malonyl group on the sugar ring were recognized in the exts. In addition to the isoflavone glycosides, some flavone or flavonol glycosides were identified in the samples on the basis of collision-induced daughter ion spectra of the aglycon ions. A comparison of results obtained with the triple quadrupole and ion trap analyzers was done in the course of the investigations.

IT 875896-74-5 876054-92-1

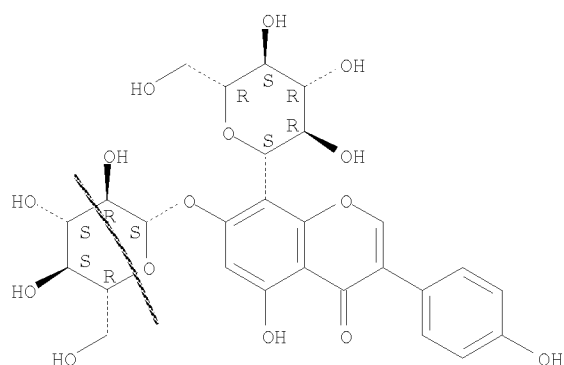
RL: NPO (Natural product occurrence); BIOL (Biological study); OCCU (Occurrence)

(profiling isoflavone conjugates in root exts. of lupine species with LC/ESI/MSn systems)

RN 875896-74-5 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-( $\beta$ -D-glucopyranosyloxy)-5-hydroxy-3-(4-hydroxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.



RN 876054-92-1 CAPLUS

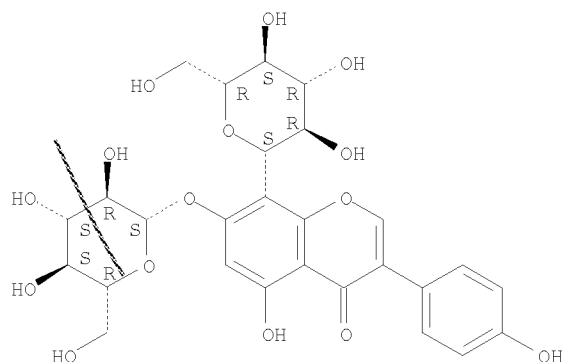
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-( $\beta$ -D-glucopyranosyloxy)-5-hydroxy-3-(4-hydroxyphenyl)-, mono(hydrogen propanedioate) (9CI) (CA INDEX NAME)

CM 1

CRN 875896-74-5

CMF C27 H30 O15

Absolute stereochemistry.



CM 2

CRN 141-82-2

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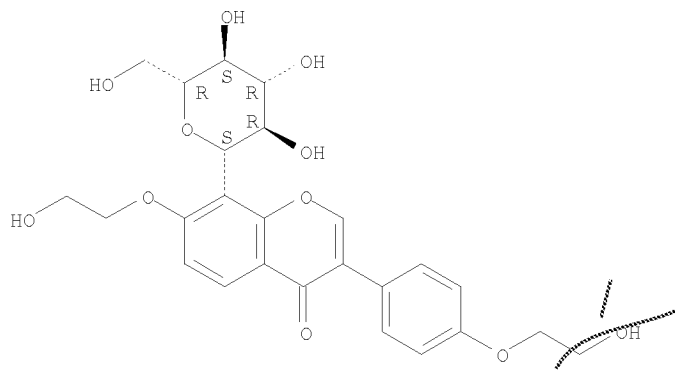
CMF C3 H4 O4

HO<sub>2</sub>C-CH<sub>2</sub>-CO<sub>2</sub>H

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 38 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2005:577178 CAPLUS  
DN 146:514406  
TI Effect of hydroxyethylpuerarin on apoptosis and expression of p53 in focal brain  
AU Sun, Ru; Wang, Xin; Wei, Xinbing; Zhang, Xiumei; Sun, Xia; Wang, Ziyang  
CS School of Medicine, Shandong University, Jinan, Shandong Province, 250012, Peop. Rep. China  
SO Zhongguo Shenghua Yaowu Zazhi (2004), 25(6), 336-338  
CODEN: ZSYZFP; ISSN: 1005-1678  
PB Zhongguo Shenghua Yaowu Zazhi Bianjibu  
DT Journal  
LA Chinese  
AB Hydroxyethylpuerarin (compound N-2035) is modified in structure from puerarin, a kind of isoflavone that was extracted from Chinese traditional medicine. The protective effect of hydroxyethylpuerarin on focal brain ischemia-reperfusion injury in rats was studied. The models of focal brain ischemia reperfusion injury by middle cerebral artery occlusion (MCAO) established in Wister rats were used for HE stain, TUNEL and determination of p53. Hydroxyethylpuerarin can significantly improve the pathol. changes and inhibit apoptosis in hippocampus CA1 area and at the same time decrease the expression of p53. Hydroxyethylpuerarin can relieve brain damage induced by focal ischemia/reperfusion in rats, which may be related to the decrease of the expression of p53 and the inhibition of apoptosis.  
IT 240131-05-9, Hydroxyethylpuerarin  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(effect of hydroxyethylpuerarin on apoptosis and expression of p53 in focal brain)  
RN 240131-05-9 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-(2-hydroxyethoxy)-3-[4-(2-hydroxyethoxy)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 39 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2005:67880 CAPLUS  
DN 142:403975  
TI Anti-inflammatory effect of hydroxyethylpuerarin on focal brain ischemia/reperfusion injury in rats  
AU Lou, Hai-Yan; Zhang, Xiu-Mei; Wei, Xin-Bing; Wang, Ru-Xia; Sun, Xia  
CS Department of Pharmacology, School of Medicine, Shandong University, Jinan, Shandong, 250012, Peop. Rep. China  
SO Chinese Journal of Physiology (Taipei, Taiwan) (2004), 47(4), 197-201  
CODEN: CJPHDG; ISSN: 0304-4920

McIntosh

10/563,471

PB Chinese Physiological Society

DT Journal

LA English

AB The objective of this study is to investigate the anti-inflammatory effect of hydroxyethylpuerarin on focal brain ischemia injury in rats and to explore its mechanisms of action. After 24 h of reperfusion following 2 h of cerebral ischemia, the infiltration of neutrophils was observed by myeloperoxidase (MPO) activity determination, the expression of intercellular adhesion mol.-1(ICAM-1) was observed by western blot and reverse transcriptase-polymerase chain reaction(RT-PCR) anal., and the nuclear translocation and DNA binding activity of nuclear factor- $\kappa$ B (NF- $\kappa$ B) were observed by western blot and electrophoretic mobility shift assay (EMSA). The results showed that hydroxyethylpuerarin could obviously inhibit the MPO activity and ICAM-1 expression following 2 h of ischemia with 24 h of reperfusion. The nuclear translocation and DNA binding activity were also decreased by hydroxyethylpuerarin treatment. These results suggested that hydroxyethylpuerarin could inhibit neutrophil-mediated inflammatory response after brain ischemia reperfusion in rats. This effect may be mediated by down-regulation of ICAM-1 and NF- $\kappa$ B activity.

IT 240131-05-9

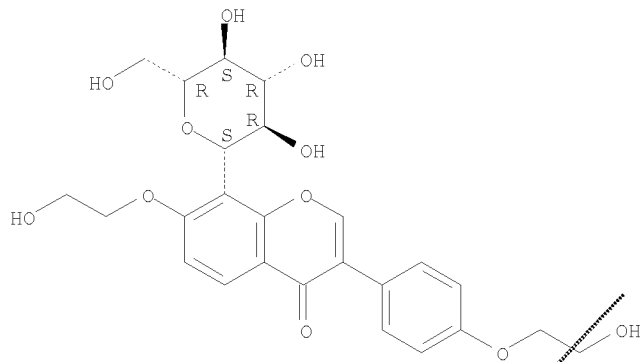
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(hydroxyethylpuerarin effectively reduced myeloperoxidase activity and intercellular adhesion mol.-1 expression following focal cerebral ischemic injury in rat which may be mediated by inhibition of nuclear factor- $\kappa$ B activation)

RN 240131-05-9 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-(2-hydroxyethoxy)-3-[4-(2-hydroxyethoxy)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 40 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2005:34764 CAPLUS

DN 142:94062

TI Preparation and pharmacological activities of C-glycosylisoflavones having alkylaminoalkoxyl substituents

IN Wang, Lin; Wang, Shengqi; Peng, Tao; Lu, Qiuju; Zhu, Xiaowei; Zhang, Shouguo; Ren, Jianping; Li, Lu; Han, Ling; Jin, Yiguang; Che, Fengsheng

PA Institute of Radiation Medicine, Academy of Military Medical Sciences PL, Peop. Rep. China; Hainan Yangpu New & Special Medicine Co., Ltd.

SO PCT Int. Appl., 28 pp.

CODEN: PIXXD2

DT Patent

LA Chinese

FAN.CNT 1

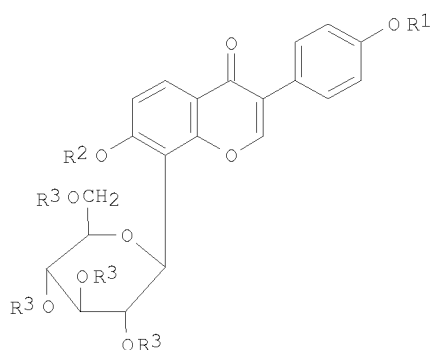
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	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005003146	A1	20050113	WO 2004-CN728	20040702
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,			

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GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,  
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,  
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW,  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,  
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,  
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,  
 SN, TD, TG

CN 1566128 A 20050119 CN 2003-148547 20030703  
 EP 1647555 A1 20060419 EP 2004-738326 20040702  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK  
 CN 1809581 A 20060726 CN 2004-80017384 20040702  
 US 20080293642 A1 20081127 US 2008-563471 20080314  
 PRAI CN 2003-148547 A 20030703  
 WO 2004-CN728 W 20040702  
 OS MARPAT 142:94062  
 GI



I

AB Title compds. I (R1, R2 = H, dialkylaminopropyl, dialkylaminobutyl, pyrrolidinoalkyl, piperidinoalkyl, etc.; R3 = H, acyl, etc.), useful for the treatment of various cardiocerebral vascular diseases, hypoxic-ischemia, treatment or prevention of diabetes mellitus and its complication, and chemical poisoning, in particular alcoholism, are prepared. Thus, 4'-(3-N-morpholinopropoxy)-7-hydroxy-8- $\beta$ -D-glucosylisoflavone was prepared and showed antihypoxia activity at 60 mg/kg i.p. in mice.

IT 816423-75-3P 816423-76-4P 816423-77-5P  
 816423-78-6P 816423-79-7P 816423-80-0P  
 816423-81-1P 816423-82-2P 816423-83-3P  
 816423-84-4P 816423-85-5P 816423-86-6P  
 816423-87-7P 816423-88-8P 816423-89-9P  
 816423-90-2P 816423-91-3P 816423-92-4P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

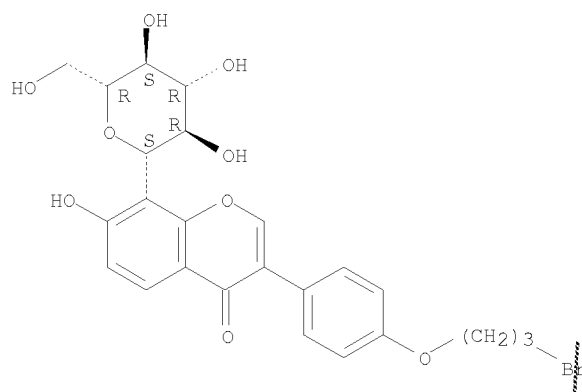
(preparation and pharmacol. activities of C-glycosylisoflavones having alkylaminoalkoxyl substituent)

RN 816423-75-3 CAPLUS

CN 4H-1-Benzopyran-4-one, 3-[4-(3-bromopropoxy)phenyl]-8- $\beta$ -D-glucopyranosyl-7-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

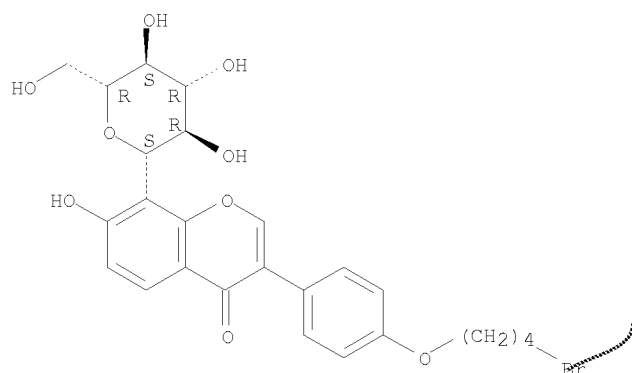
10/563,471



RN 816423-76-4 CAPLUS

CN 4H-1-Benzopyran-4-one, 3-[4-(4-bromobutoxy)phenyl]-8- $\beta$ -D-glucopyranosyl-7-hydroxy- (CA INDEX NAME)

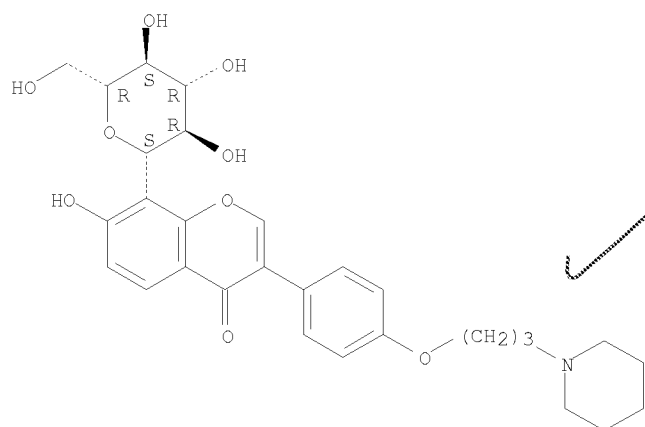
Absolute stereochemistry.



RN 816423-77-5 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-[4-[3-(1-piperidinyl)propoxy]phenyl]- (CA INDEX NAME)

Absolute stereochemistry.



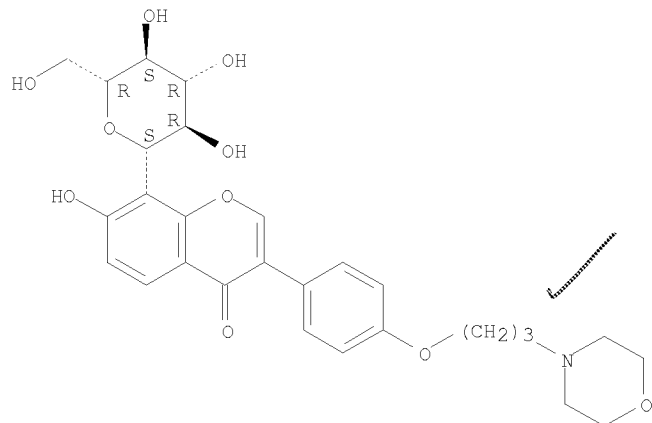
RN 816423-78-6 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-[4-[3-(4-morpholinyl)propoxy]phenyl]- (CA INDEX NAME)

McIntosh

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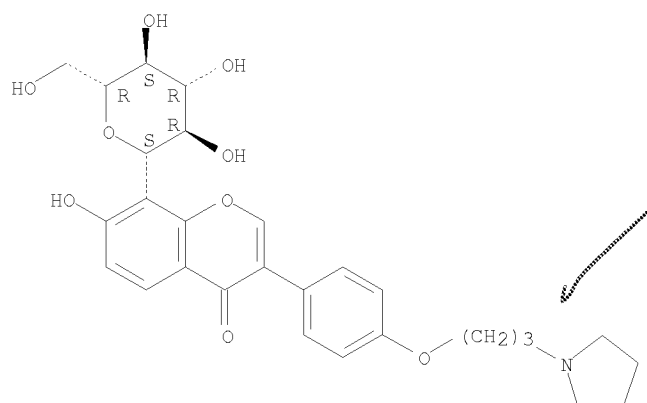
Absolute stereochemistry.



RN 816423-79-7 CAPLUS

CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-[4-[3-(1-pyrrolidinyl)propoxy]phenyl]- (CA INDEX NAME)

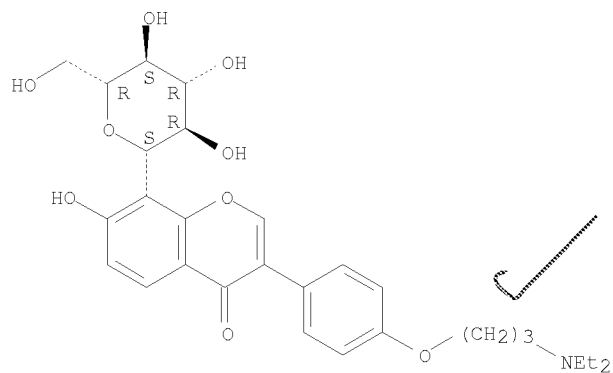
Absolute stereochemistry.



RN 816423-80-0 CAPLUS

CN 4H-1-Benzopyran-4-one, 3-[4-[3-(diethylamino)propoxy]phenyl]-8-β-D-glucopyranosyl-7-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.



McIntosh

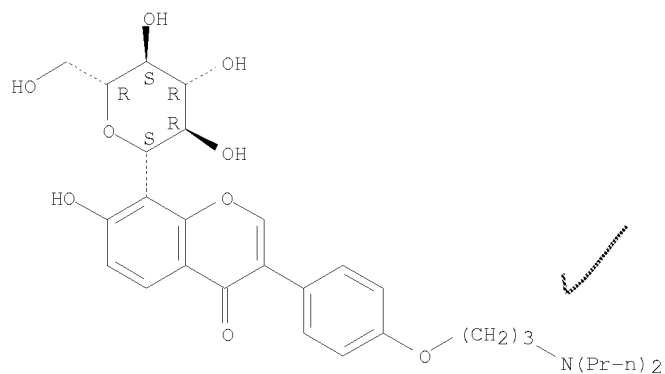


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RN 816423-81-1 CAPLUS

CN 4H-1-Benzopyran-4-one, 3-[4-[3-(dipropylamino)propoxy]phenyl]-8- $\beta$ -D-glucopyranosyl-7-hydroxy- (CA INDEX NAME)

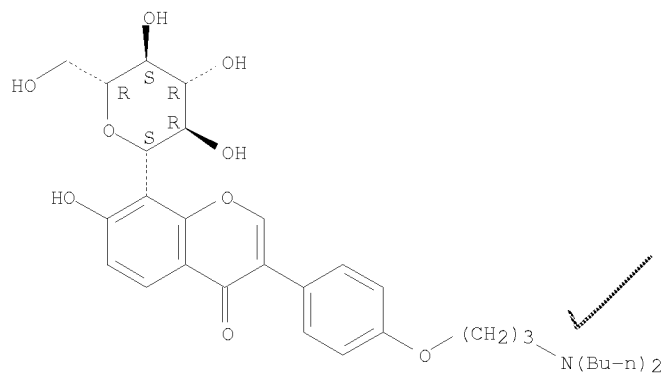
Absolute stereochemistry.



RN 816423-82-2 CAPLUS

CN 4H-1-Benzopyran-4-one, 3-[4-[3-(dibutylamino)propoxy]phenyl]-8- $\beta$ -D-glucopyranosyl-7-hydroxy- (CA INDEX NAME)

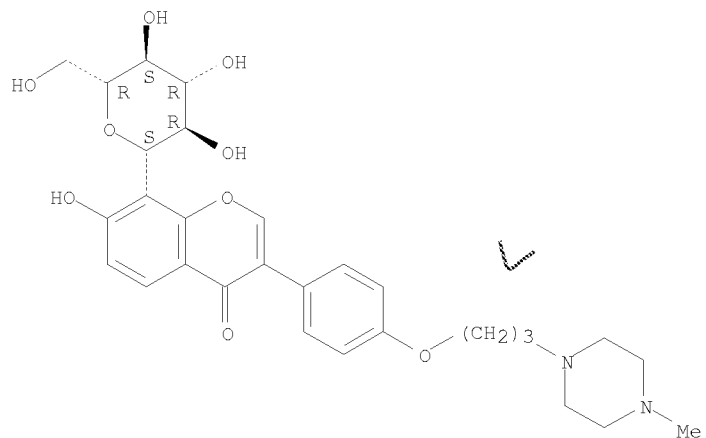
Absolute stereochemistry.



RN 816423-83-3 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-[4-[3-(4-methyl-1-piperazinyl)propoxy]phenyl]- (CA INDEX NAME)

Absolute stereochemistry.



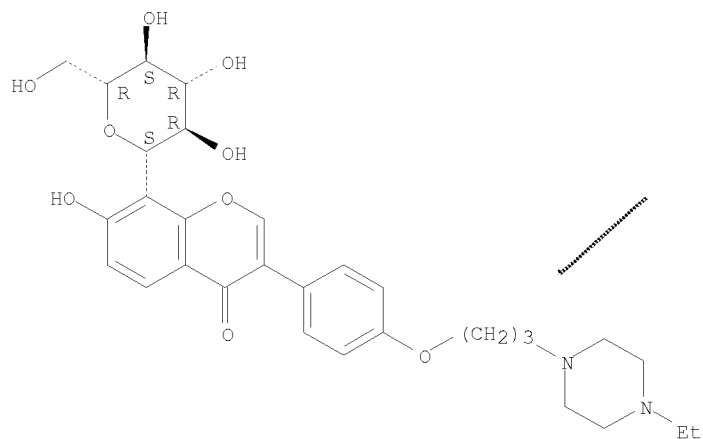
McIntosh

10/563,471

RN 816423-84-4 CAPLUS

CN 4H-1-Benzopyran-4-one, 3-[4-[3-(4-ethyl-1-piperazinyl)propoxy]phenyl]-8-  
 $\beta$ -D-glucopyranosyl-7-hydroxy- (CA INDEX NAME)

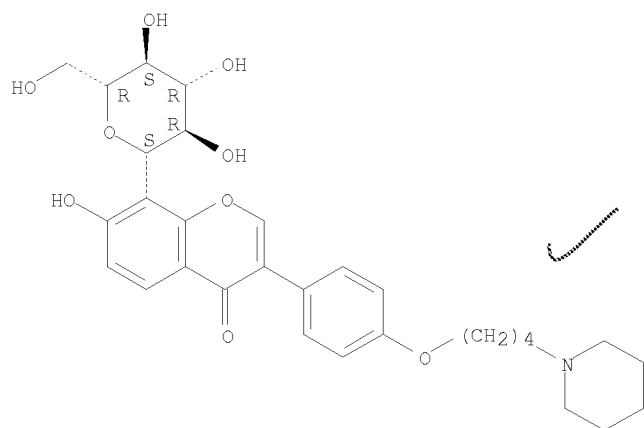
Absolute stereochemistry.



RN 816423-85-5 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-[4-[4-(1-piperidinyl)butoxy]phenyl]- (CA INDEX NAME)

Absolute stereochemistry.



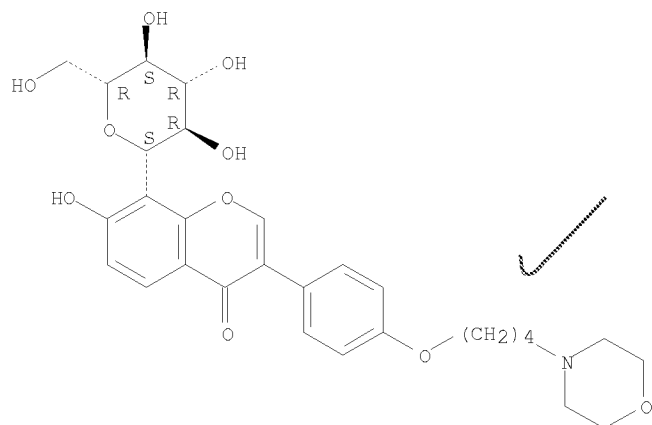
RN 816423-86-6 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-[4-[4-(4-morpholinyl)butoxy]phenyl]- (CA INDEX NAME)

Absolute stereochemistry.

McIntosh

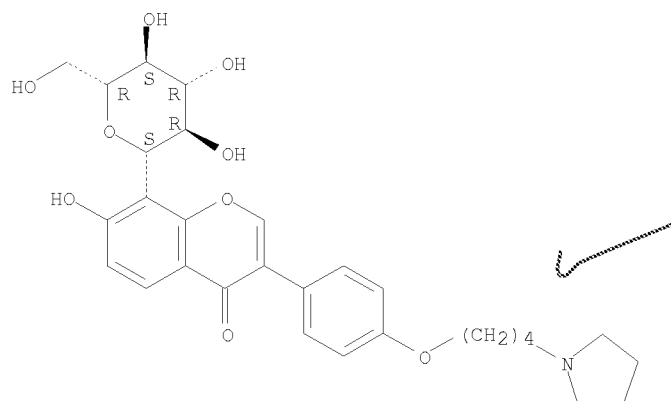
10/563,471



RN 816423-87-7 CAPLUS

CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-[4-[4-(1-pyrrolidinyl)butoxy]phenyl]- (CA INDEX NAME)

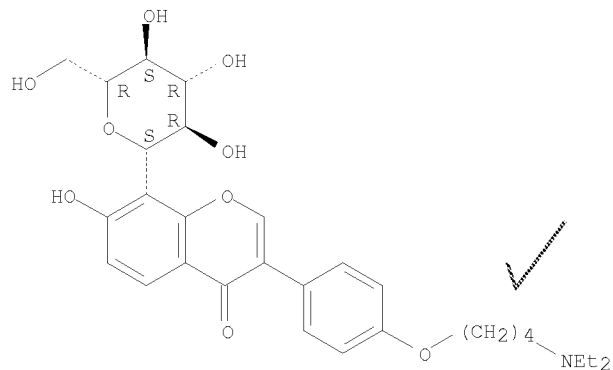
Absolute stereochemistry.



RN 816423-88-8 CAPLUS

CN 4H-1-Benzopyran-4-one, 3-[4-[4-(diethylamino)butoxy]phenyl]-8-β-D-glucopyranosyl-7-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.



RN 816423-89-9 CAPLUS

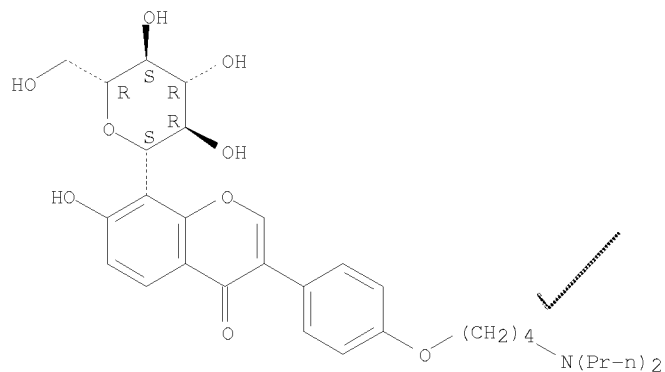
CN 4H-1-Benzopyran-4-one, 3-[4-[4-(dipropylamino)butoxy]phenyl]-8-β-D-

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glucopyranosyl-7-hydroxy- (CA INDEX NAME)

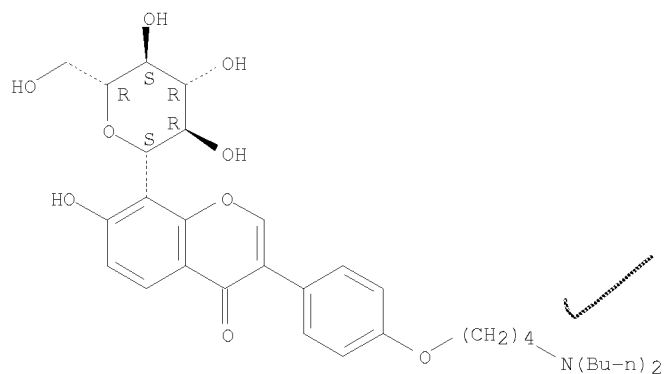
Absolute stereochemistry.



RN 816423-90-2 CAPLUS

CN 4H-1-Benzopyran-4-one, 3-[4-[4-(dibutylamino)butoxy]phenyl]-8-β-D-glucopyranosyl-7-hydroxy- (CA INDEX NAME)

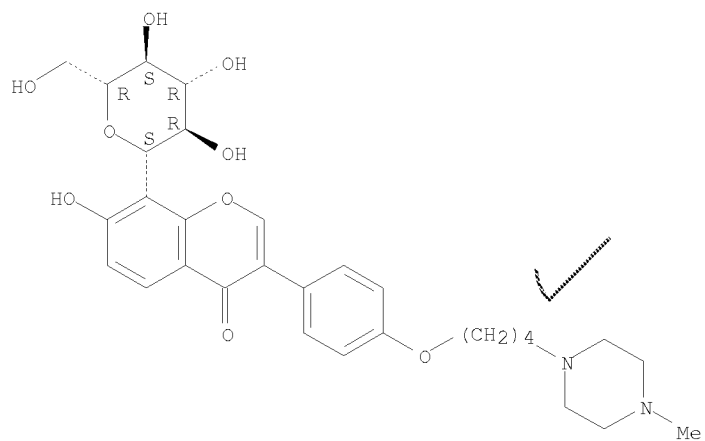
Absolute stereochemistry.



RN 816423-91-3 CAPLUS

CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-[4-[4-(4-methyl-1-piperazinyl)butoxy]phenyl]- (CA INDEX NAME)

Absolute stereochemistry.

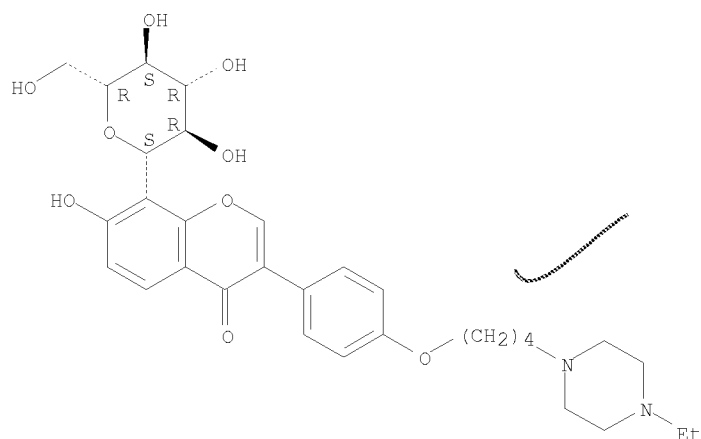


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10/563,471

RN 816423-92-4 CAPLUS  
CN 4H-1-Benzopyran-4-one, 3-[4-[4-(4-ethyl-1-piperazinyl)butoxy]phenyl]-8-  
 $\beta$ -D-glucopyranosyl-7-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.



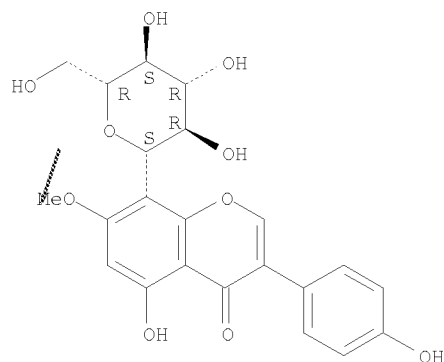
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 41 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2004:442029 CAPLUS  
DN 142:257695  
TI Chemical constituents from the leaves of Dalbergia hainanensis  
AU Zhang, Peicheng; Wu, Yan; Yu, Dequan  
CS Institute of Materia Medica, Chinese Academy of Medical Science and Peking  
Union Medical College, Beijing, 100050, Peop. Rep. China  
SO Zhongguo Zhongyao Zazhi (2003), 28(6), 527-530  
CODEN: ZZZAE3; ISSN: 1001-5302  
PB Zhongguo Yaoxuehui  
DT Journal  
LA Chinese  
AB The chemical constituents from the leaves of Dalbergia hainanensis were  
studied. Compds. were isolated by chromatog. techniques on silica gel and  
polyamide column. Their structures were elucidated by chemical and  
spectroscopic methods. Thirteen compds. were identified as  
8-C-glucosyl-7-methoxy-4',5-dihydroxyisoflavone,  
8-C-glucosyl-7,4',5-trihydroxyisoflavone, 2-hydroxy-5-methoxy biochanin A,  
formononetin, 3,5-dimethoxy-4-hydroxybenzaldehyde,  
1-O- $\beta$ -D-glucopyranosyl-(2S,3S,4R,8Z)-2-[(2R)-2-hydroxyl  
docosylamino]-8-octadecene-1,3,4-triol, friedelin, taraxerol,  
3 $\beta$ -hydroxy-glutin-5-ene, ursolic acid,  $\beta$ -sitosterol,  
daucosterol, and lupeol. All the compds. were isolated from the plant for  
the first time.  
IT 52448-12-1  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(constituents from leaves of Dalbergia hainanensis)  
RN 52448-12-1 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-5-hydroxy-3-(4-  
hydroxyphenyl)-7-methoxy- (CA INDEX NAME)

Absolute stereochemistry.

McIntosh

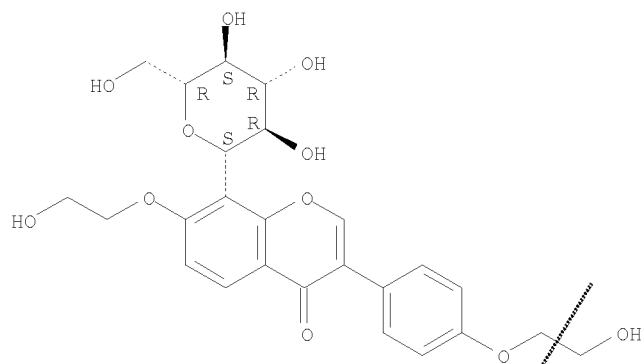
10/563,471



L9 ANSWER 42 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2004:376414 CAPLUS  
DN 140:368689  
TI Application of hydroxyethyl-puerarin in preparing the new drug for  
treating cerebrovascular diseases  
IN Zuo, Chunxu; Zhang, Xiumei; Zhong, Ying; Yang, Shangjun; Wang, Ziyang;  
Wang, Ju; Chen, Jianqiang; Li, Anguo; Liu, Jikai  
PA Zhenping Pharmaceutical Factory, Shanxi, Peop. Rep. China  
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 11 pp.  
CODEN: CNXXEV  
DT Patent  
LA Chinese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1394603	A	20030205	CN 2002-135352	20020809
	CN 1186026	C	20050126		
PRAI	CN 2002-135352		20020809		
AB	The invention relates to the application of hydroxyethyl-puerarin in preparing the new medical preps. for treating cerebrovascular ischemia.				
IT	240131-05-9 RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (application of hydroxyethyl-puerarin in preparing the new drug for treating cerebrovascular diseases)				
RN	240131-05-9 CAPLUS				
CN	4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-(2-hydroxyethoxy)-3-[4- (2-hydroxyethoxy)phenyl]- (CA INDEX NAME)				

Absolute stereochemistry.



L9 ANSWER 43 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2004:20483 CAPLUS  
DN 140:71053

McIntosh

TI Compounds useful for the inhibition of mitochondrial aldehyde dehydrogenase (ALDH-2) and modulating alcohol consumption, dependence and abuse

IN Keung, Wing Ming; Vallee, Bert L.; Gao, Guangyao

PA The Endowment for Research in Human Biology, Inc., USA

SO PCT Int. Appl., 67 pp.

CODEN: PIXXD2

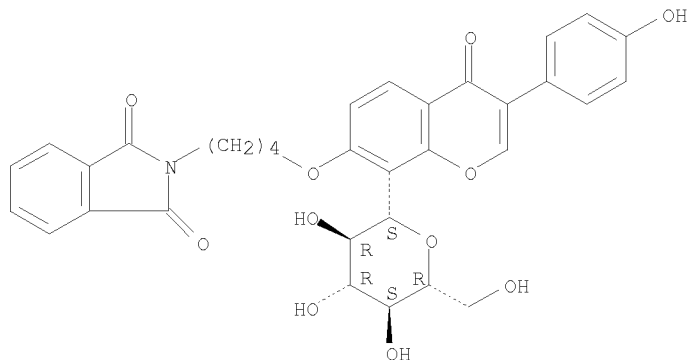
DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004002470	A1	20040108	WO 2003-US20584	20030627
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	CA 2491089	A1	20040108	CA 2003-2491089	20030627
	AU 2003247844	A1	20040119	AU 2003-247844	20030627
	AU 2003247844	B2	20090122		
	US 20040068003	A1	20040408	US 2003-609120	20030627
	US 7368434	B2	20080506		
	EP 1542675	A1	20050622	EP 2003-762244	20030627
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
	CN 1671373	A	20050921	CN 2003-817905	20030627
	JP 2006501180	T	20060112	JP 2004-518118	20030627
	NZ 537366	A	20071221	NZ 2003-537366	20030627
	MX 2005000122	A	20051214	MX 2005-122	20050103
PRAI	US 2002-391907P	P	20020627		
	WO 2003-US20584	W	20030627		
OS	MARPAT 140:71053				
AB	The present invention provides novel antidipsotropic compds. The invention further provides methods of inhibiting ALDH-2 using the compds. described herein. Methods for modulating alc. consumption, alc. dependence and/or alc. abuse by administering the compds. of the invention to an individual are also provided. The present invention further provides a rationale for designing addnl. novel antidipsotropic compds. Hexzein, given orally, reduced ethanol intake in hamsters.				
IT	640275-77-0P 640275-88-3P RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation) (antidipsotropic compds. useful for inhibition of mitochondrial aldehyde dehydrogenase (ALDH-2) and modulating alc. consumption, dependence and abuse)				
RN	640275-77-0 CAPLUS				
CN	4H-1-Benzopyran-4-one, 7-[4-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)butoxy]-8-β-D-glucopyranosyl-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)				

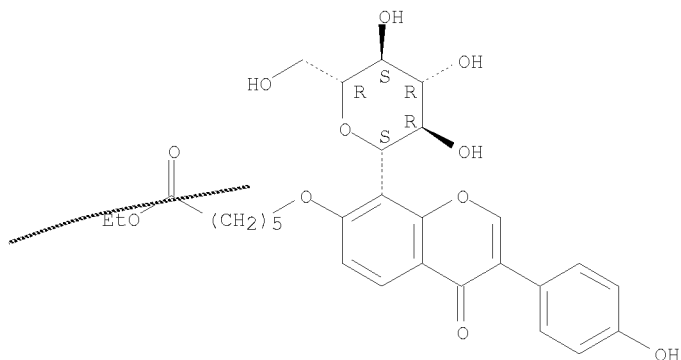
Absolute stereochemistry.



10/563,471

RN 640275-88-3 CAPLUS  
CN Hexanoic acid, 6-[[8-β-D-glucopyranosyl-3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]-, ethyl ester (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

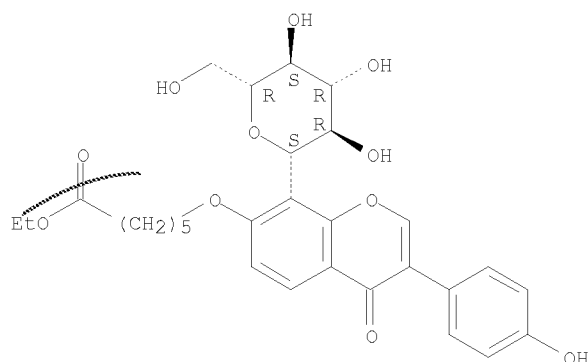
L9 ANSWER 44 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2003:645702 CAPLUS  
DN 140:138710  
TI Synthesis of daidzin analogues as potential agents for alcohol abuse  
AU Gao, Guang-Yao; Li, Dian-Jun; Keung, Wing Ming  
CS Center for Biochemical and Biophysical Science and Medicine and Department of Psychiatry at Massachusetts Mental Health Center, Harvard Medical School, Boston, MA, 02115, USA  
SO Bioorganic & Medicinal Chemistry (2003), 11(18), 4069-4081  
CODEN: BMECEP; ISSN: 0968-0896  
PB Elsevier Science Ltd.  
DT Journal  
LA English  
OS CASREACT 140:138710  
AB Daidzin, the active principle of an herbal remedy for 'alc. addiction', has been shown to reduce alc. consumption in all laboratory animals tested to date. Correlation studies using structural analogs of daidzin suggests that it acts by raising the monoamine oxidase (MAO)/mitochondrial aldehyde dehydrogenase (ALDH-2) activity ratio (J. Med. Chemical 2000, 43, 4169). Structure-activity relationship (SAR) studies on the 7-O-substituted analogs of daidzin have revealed structural features important for ALDH-2 and MAO inhibition (J. Med. Chemical 2001, 44, 3320). We here evaluated effects of substitutions at 2, 5, 6, 8, 3' and 4' positions of daidzin on its potencies for ALDH-2 and MAO inhibition. Results show that analogs with 4'-substituents that are small, polar and with hydrogen bonding capacities are most potent ALDH-2 inhibitors, whereas those that are non-polar and with electron withdrawing capacities are potent MAO inhibitors. Analogs with a 5-OH group are less potent ALDH-2 inhibitors but are more potent MAO inhibitors. All the 2-, 6-, 8- and 3'-substituted analogs tested so far do not inhibit ALDH-2 and/or have decreased potencies for MAO inhibition. This, together with the results obtained from previous studies, suggests that a potent antidipsotropic analog would be a 4',7-disubstituted isoflavone. The 4'-substituent should be small, polar, and with hydrogen bonding capacities such as, -OH and -NH<sub>2</sub>; whereas the 7-substituent should be a straight-chain alkyl with a terminal polar function such as -(CH<sub>2</sub>)<sub>n</sub>-OH with 2 ≤ n ≤ 6, -(CH<sub>2</sub>)<sub>n</sub>-COOH with 5 ≤ n ≤ 10, or -(CH<sub>2</sub>)<sub>n</sub>-NH<sub>2</sub> with n ≥ 4.  
IT 640275-88-3P  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(synthesis and structure-activity relationship of daidzin analogs as potential agents for alc. abuse)  
RN 640275-88-3 CAPLUS  
CN Hexanoic acid, 6-[[8-β-D-glucopyranosyl-3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]-, ethyl ester (CA INDEX NAME)

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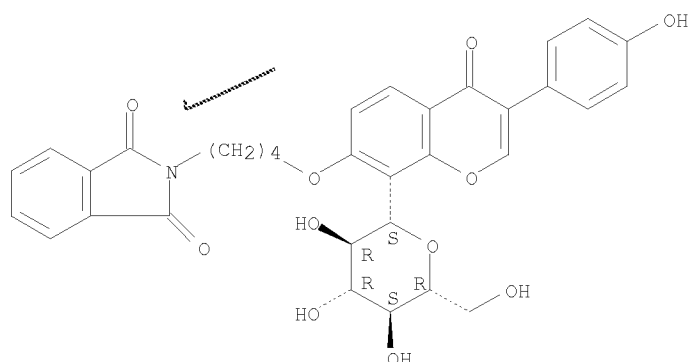
10/563,471

Absolute stereochemistry.



IT 640275-77-0  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(synthesis and structure-activity relationship of daidzin analogs as  
potential agents for alc. abuse)  
RN 640275-77-0 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-[4-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-  
yl)butoxy]-8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)- (9CI) (CA INDEX  
NAME)

Absolute stereochemistry.

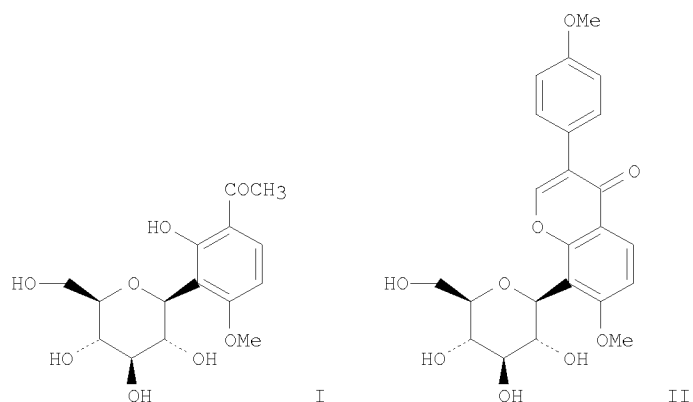


compound 8e on page 4073

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 45 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2003:627030 CAPLUS  
DN 139:323705  
TI Total synthesis of puerarin, an isoflavone C-glycoside  
AU Lee, David Y. W.; Zhang, Wu-Yan; Karnati, Vishnu Vardhan R.  
CS Harvard Medical School, Bioorganic and Natural Products Laboratory, McLean  
Hospital, Belmont, MA, 02478, USA  
SO Tetrahedron Letters (2003), 44(36), 6857-6859  
CODEN: TELEAY; ISSN: 0040-4039  
PB Elsevier Science B.V.  
DT Journal  
LA English  
OS CASREACT 139:323705  
GI

McIntosh



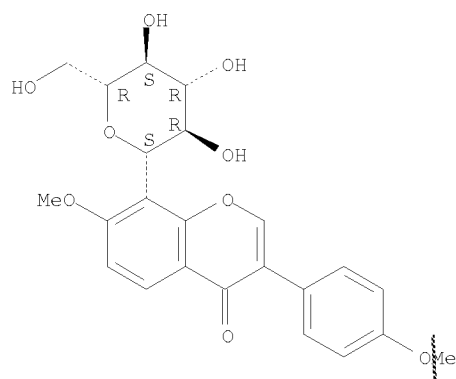
AB We completed the first total synthesis of puerarin, an isoflavone C-glycoside. The key intermediate,  $\beta$ -D-glucopyranosyl-2,6-dimethoxybenzene, was obtained by coupling of 2,6-dimethoxyphenyl lithium with perbenzyl glycopyranolactone in 56% yield. Condensation of I with p-methoxybenzaldehyde gave the chalcone. The acetyl protected chalcone was cyclized with  $\text{Ti}(\text{NO}_3)_3$  to yield II. Demethylation of II was accomplished by refluxing with TMSI in  $\text{CH}_3\text{CN}$  to give puerarin.

IT 69655-50-1P 69655-53-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (synthesis of puerarin, an isoflavone C-glycoside using  $\beta$ -D-glucopyranosyl-2,6-dimethoxybenzene as the key chiral synthon)

RN 69655-50-1 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-methoxy-3-(4-methoxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.

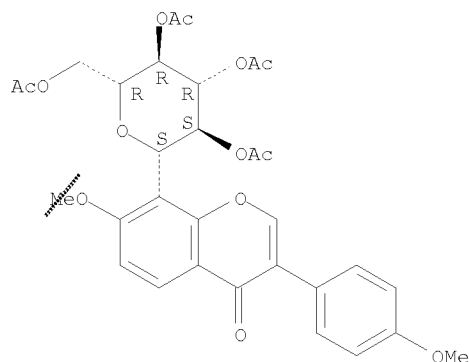


RN 69655-53-4 CAPLUS

CN 4H-1-Benzopyran-4-one, 7-methoxy-3-(4-methoxyphenyl)-8-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

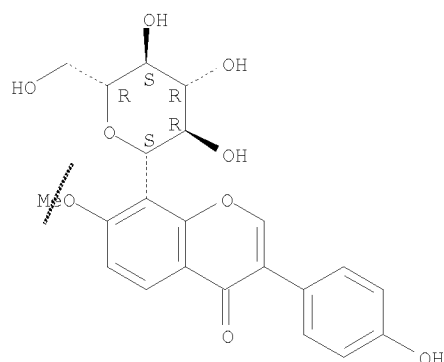
Absolute stereochemistry.

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IT 615275-47-3P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(synthesis of puerarin, an isoflavone C-glycoside using  
 $\beta$ -D-glucopyranosyl-2,6-dimethoxybenzene as the key chiral synthon)  
RN 615275-47-3 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)-7-  
methoxy- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

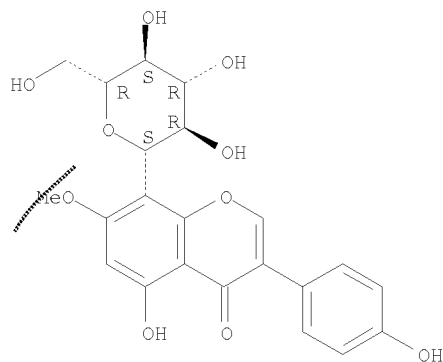
L9 ANSWER 46 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2003:599432 CAPLUS  
DN 139:381034  
TI Conformational study on 8-C-glucosyl-prunetin by dynamic NMR spectroscopy  
AU Zhang, Pei-Cheng; Wang, Ying-Hong; Liu, Xin; Yi, Xiang; Chen, Ruo-Yun; Yu,  
De-Quan  
CS Institute of Material Medica, Chinese Academy of Medical Sciences and  
Peking Union Medical College, Beijing, 100050, Peop. Rep. China  
SO Huaxue Xuebao (2003), 61(7), 1157-1160  
CODEN: HHHPA4; ISSN: 0567-7351  
PB Kexue Chubanshe  
DT Journal  
LA Chinese  
OS CASREACT 139:381034  
AB By means of variable temperature dynamic NMR spectra, conformation of  
8-C-glucosyl prunetin, isolated from the leaves of Dalbergia hainanensis  
(Leguminosae), and other 8-C-glucosyl flavones was studied. The  
restricted rotation around the 1''-C(sp<sup>3</sup>)-8-C(sp<sup>2</sup>) bond in the  
C-glucosides isoflavonoid results in two main conformers (syn and anti).  
With the help of Mol. Mechanics (MM) calcn., the preferred conformation A  
of 8-C-glucosyl prunetin has 1''-H gauche to the 7-OCH<sub>3</sub>. The barrier to  
rotation was 75.66 kJ/mol. This result agrees with the calculated value 71.48  
kJ/mol of free energy of activation for the interconversion between the  
conformers.

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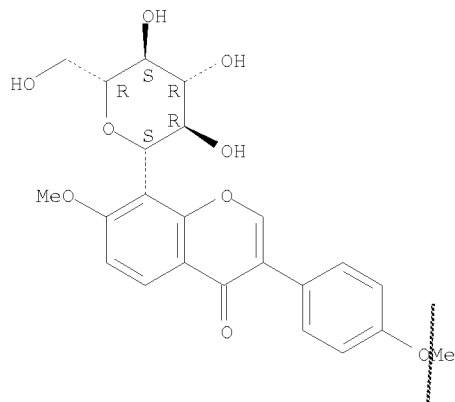
IT 52448-12-1P  
RL: PRP (Properties); PUR (Purification or recovery); PREP (Preparation)  
(conformational study on 8-C-glucosyl-prunetin by dynamic NMR  
spectroscopy)  
RN 52448-12-1 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-5-hydroxy-3-(4-  
hydroxyphenyl)-7-methoxy- (CA INDEX NAME)

Absolute stereochemistry.



IT 69655-50-1P 240131-04-8P 623900-91-4P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(conformational study on 8-C-glucosyl-prunetin by dynamic NMR  
spectroscopy)  
RN 69655-50-1 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-methoxy-3-(4-  
methoxyphenyl)- (CA INDEX NAME)

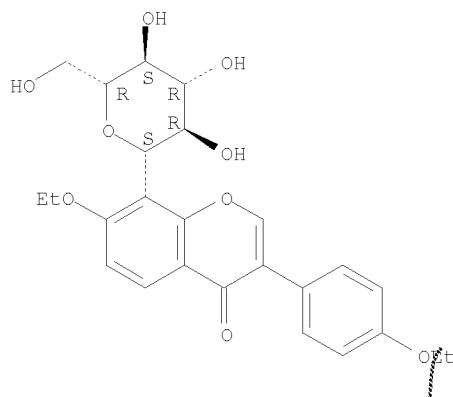
Absolute stereochemistry.



RN 240131-04-8 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-ethoxy-3-(4-ethoxyphenyl)-8- $\beta$ -D-  
glucopyranosyl- (CA INDEX NAME)

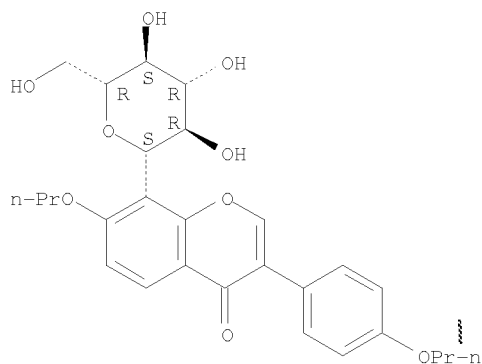
Absolute stereochemistry.

10/563,471



RN 623900-91-4 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-propoxy-3-(4-propoxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 47 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2003:438997 CAPLUS  
DN 139:148617  
TI Profiling and Quantification of Isoflavonoids in Kudzu Dietary Supplements by High-Performance Liquid Chromatography and Electrospray Ionization Tandem Mass Spectrometry  
AU Prasain, Jeevan K.; Jones, Kenneth; Kirk, Marion; Wilson, Landon; Smith-Johnson, Michelle; Weaver, Connie; Barnes, Stephen  
CS Department of Pharmacology and Toxicology, Purdue-UAB Botanicals Center for Age-Related Disease and Comprehensive Cancer Center Mass Spectrometry Shared Facility, University of Alabama at Birmingham, Birmingham, AL, 35294, USA  
SO Journal of Agricultural and Food Chemistry (2003), 51(15), 4213-4218  
CODEN: JAFCAU; ISSN: 0021-8561  
PB American Chemical Society  
DT Journal  
LA English  
AB The kudzu vine (*Pueraria* sp.) is a rich source of isoflavones. Dietary supplements based on kudzu have become com. available. In the present study, LC coupled with neg. and pos. electrospray ionization tandem mass spectrometry (MS/MS) and diode array detection (DAD) was used for the detection and characterization of isoflavonoids in kudzu dietary supplements (KDS). The MS/MS spectrum of the protonated ion of puerarin showed characteristic product ions of the C-glycoside unit itself, whereas daidzin generated an abundant Y+0 aglycon ion in its product ion spectrum. A base peak due to the loss of 120 Da [M + H - 120]<sup>+</sup> is the diagnostic ion for C-glycosides. Neutral loss scans allowed for the detection of other C- and O-glycosides in the methanolic extract of KDS, and their structures have been proposed. The concentration of isoflavonoids in the methanolic extract of com. available KDS was quantified by using DAD-HPLC. Puerarin, rather

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than daidzin, was the most abundant component (8.44-30.60 mg/capsule) in com. available KDS.

IT 117047-08-2

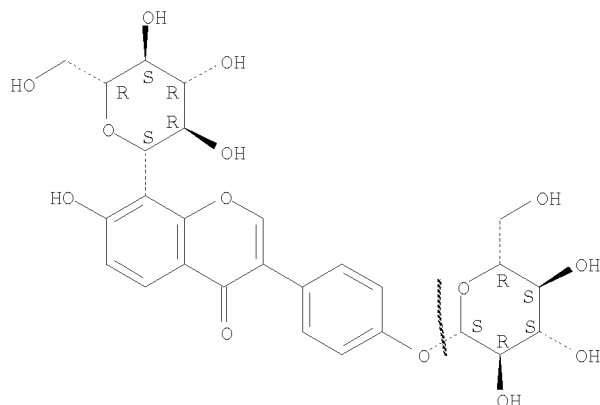
RL: ANT (Analyte); ANST (Analytical study)

(profiling and quantification of isoflavonoids in kudzu dietary supplements by HPLC and electrospray ionization tandem MS)

RN 117047-08-2 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-3-[4-( $\beta$ -D-glucopyranosyloxy)phenyl]-7-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 48 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2002:609154 CAPLUS

DN 138:238346

TI Study on the preparation of 7,4'-di-O-hydroxyethylpuerarin

AU Hou, Dianjie; Wang, Jianwu; Sun, Jianlong

CS College of Chemistry and Chemical Engineering, Shandong University, Jinan, 250100, Peop. Rep. China

SO Zhongguo Yaowu Huaxue Zazhi (2002), 12(2), 103-104

CODEN: ZYHZEJ; ISSN: 1005-0108

PB Zhongguo Yaowu Huaxue Zazhi Bianjibu

DT Journal

LA Chinese

OS CASREACT 138:238346

AB 7,4'-Di-O-hydroxyethylpuerarin was prepared by two different methods such as hydroxyethylation with 2-chloroethanol or 2-bromoethanol and oxirane method. The hydroxyethylation of puerarin with ethylene oxide was the more practical and convenient method.

IT 240131-05-9P, 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-(2-hydroxyethoxy)-3-[4-(2-hydroxyethoxy)phenyl]-

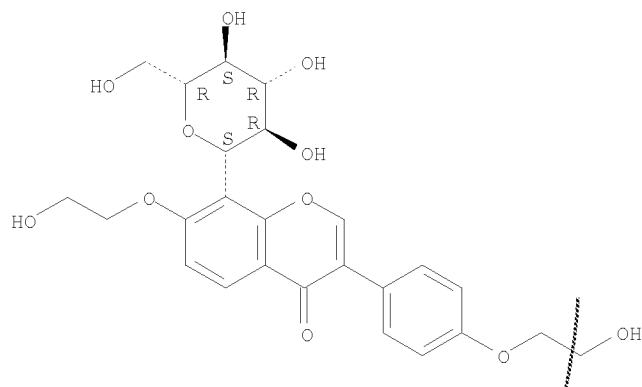
RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of 7,4'-di-O-hydroxyethylpuerarin by hydroxyethylation of puerarin and with oxirane)

RN 240131-05-9 CAPLUS

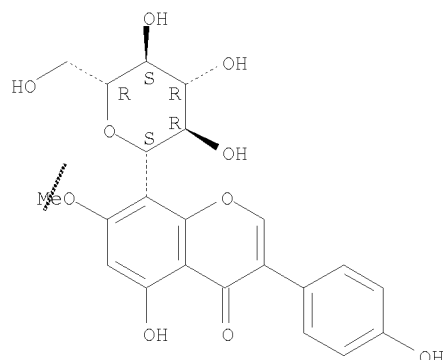
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-(2-hydroxyethoxy)-3-[4-(2-hydroxyethoxy)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 49 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 2002:560124 CAPLUS  
 DN 137:337496  
 TI Conformational study of 8-C-glucosyl-prunetin by dynamic NMR spectroscopy  
 AU Zhang, Pei Cheng; Wang, Ying Hong; Liu, Xin; Yi, Xiang; Chen, Ruo Yun; Yu, De Quan  
 CS Institute of Materia Medica, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, 100050, Peop. Rep. China  
 SO Chinese Chemical Letters (2002), 13(7), 645-648  
 CODEN: CCLEE7; ISSN: 1001-8417  
 PB Chinese Chemical Society  
 DT Journal  
 LA English  
 AB By variable temperature NMR spectra, conformation of 8-C-glucosyl prunetin, isolated from the leaves of *Dalbergia hainanensis* (Leguminosae), was studied. The restricted rotation around the C (sp<sup>3</sup>)-C (sp<sup>2</sup>) bond in the C-glucosides isoflavonoid results in two main conformers (syn and anti). With the help of MM calcn., the preferred conformation A has H-1'' gauche to the 7-OMe. The barrier to rotation was 18.1 kcal/mol. This result agrees with the calculated value 16.2 kcal/mol of free energy of activation for the interconversion between the conformers.  
 IT 52448-12-1, 8-C-Glucosyl prunetin  
 RL: PRP (Properties)  
 (conformational study of 8-C-glucosyl-prunetin by dynamic NMR spectroscopy)  
 RN 52448-12-1 CAPLUS  
 CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-5-hydroxy-3-(4-hydroxyphenyl)-7-methoxy- (CA INDEX NAME)

Absolute stereochemistry.



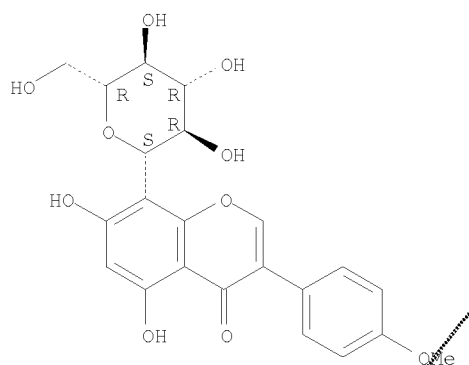
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 50 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 2001:251181 CAPLUS

10/563,471

DN 135:16768  
TI Isoflavonoids and alkaloids from *Spartidium saharae*  
AU Abdel-Halim, Osama B.; Abdel-Fattah, Hosny A.; Halaweish, Fathi T.; Halim, Ahmed F.  
CS Dept. of Chemistry, South Dakota State Univ., SD, USA  
SO Natural Product Sciences (2000), 6(4), 189-192  
CODEN: NPSCFB; ISSN: 1226-3907  
PB Korean Society of Pharmacognosy  
DT Journal  
LA English  
AB A new isoflavone, (+)-4'-O-methyl-8-C- $\beta$ -D-glucopyranosylgenistein, was isolated from the aerial parts of *Spartidium saharae* together with the known isoflavone (+)-8-C- $\beta$ -D-glucopyranosylgenistein as well as the dipiperidine alkaloids (+)-ammodendrine and (+)-N-acetylhystrine. Details of their structure elucidation are based on chemical and spectroscopic methods. N-formylammodendrine was detected by GC-MS. The potential chemotaxonomic value of the alkaloid content is discussed. Cytotoxic activity has been determined for both alc. extract and isolated compds.  
IT 342655-86-1P  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)  
(isolation from *Spartidium saharae* and structural elucidation of)  
RN 342655-86-1 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-5,7-dihydroxy-3-(4-methoxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 51 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2001:87754 CAPLUS  
DN 134:307892  
TI Isoflavones and a saponin from *Crotalaria thebaica* (Del.) DC growing in Egypt  
AU Ibraheim, Z. Z.; Khalifa, A. A.  
CS Department of Pharmacognosy, Faculty of Pharmacy, Assiut University, Assiut, Egypt  
SO Bulletin of Pharmaceutical Sciences, Assiut University (2000), 23(2), 177-186  
CODEN: BPAUEC; ISSN: 1110-0052  
PB Assiut University Press  
DT Journal  
LA English  
AB Further investigation of the dried aerial parts of *Crotalaria thebaica* (Del.) DC. led to the isolation of two isoflavone aglycons; Biochanin A and Genistein, an isoflavone-O-glucoside; Biochanin A-7-O- $\beta$ -glucoside, 2 isoflavone C-glycosides identified as 8-C-glucosyl genistein and 6,8-di-C-glucosyl biochanin A and a saponin glycoside identified as robinioside C Me ester. The identification of the isolated compds. was based on chemical and spectral studies.  
IT 335139-12-3, 6,8-Di-C-glucosyl biochanin A  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

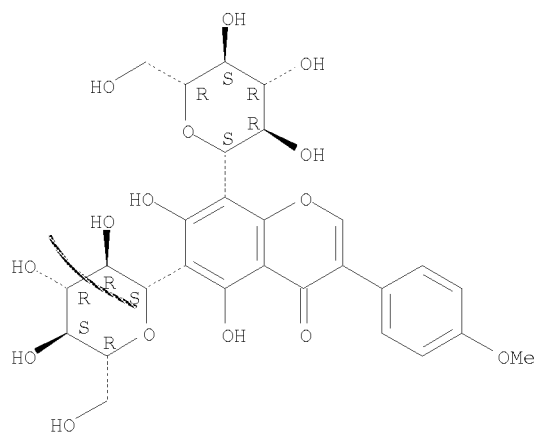
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BIOL (Biological study); OCCU (Occurrence)  
(isoflavones and a saponin from *Crotalaria thebaica*)  
RN 335139-12-3 CAPLUS  
CN 4H-1-Benzopyran-4-one, 6,8-di- $\beta$ -D-glucopyranosyl-5,7-dihydroxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 52 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2001:31340 CAPLUS  
DN 134:95502  
TI Compositions and methods for treating or preventing osteoporosis  
IN Prince, Richard Lewis; Min, Xu  
PA University of Western Australia, Australia; Guangzhou University of  
Traditional Chinese Medicine  
SO PCT Int. Appl., 93 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001001996	A1	20010111	WO 2000-AU737	20000629
	WO 2001001996	A9	20020912		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			

PRAI AU 1999-1273 A 19990629

AB The invention relates to a therapeutic composition and method for treating osteoporosis and other calcium, and/or estrogen related disorders. Examples are given for treating osteoporosis with exts. of plants such as *Epimedium koreanum*, *Salvia miltiorrhiza*, *Asragalus membranaceus*, *Pueraria thomsonii*, and *Psoralea corylifolia*.

IT 24562-39-8, Puerarin diacetate 92117-94-7,  
4'-Methoxypuerarin

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses) (herb medicine exts. for treating or preventing osteoporosis)

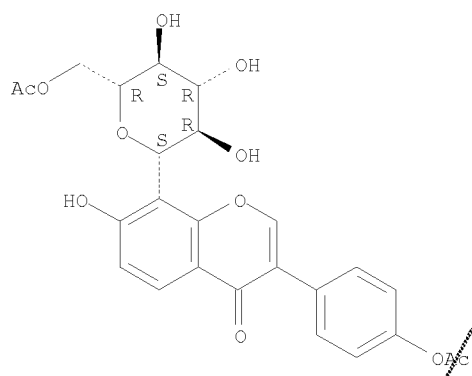
RN 24562-39-8 CAPLUS

CN 4H-1-Benzopyran-4-one, 8-(6-O-acetyl- $\beta$ -D-glucopyranosyl)-3-[4-(acetyloxy)phenyl]-7-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

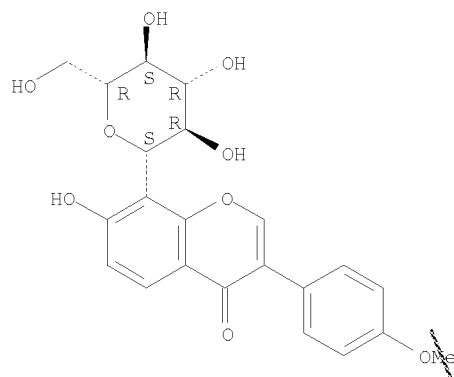
McIntosh

10/563,471



RN 92117-94-7 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-(4-methoxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 53 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2000:761931 CAPLUS  
DN 133:325492  
TI Breast-enlarging agent containing Pueraria root products  
IN Hirose, Katsutoshi; Katayama, Masato; Hirata, Naonori  
PA Kobe Tennenbutsu Kagaku K. K., Japan  
SO Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000302667	A	20001031	JP 1999-115773	19990423

AB The invention relates to a breast-enlarging agent containing Pueraria root or its product, especially Pueraria lobata or Pueraria thomsonii, containing isoflavones. A powder of Puerariae Radix root was combined with vaseline to obtain an ointment. The agent may further use for treatment and prevention of menopausal syndrome, skin-whitening, or hair growth-stimulation.

IT 303114-83-2

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)

(breast-enlarging agent containing Pueraria root products)

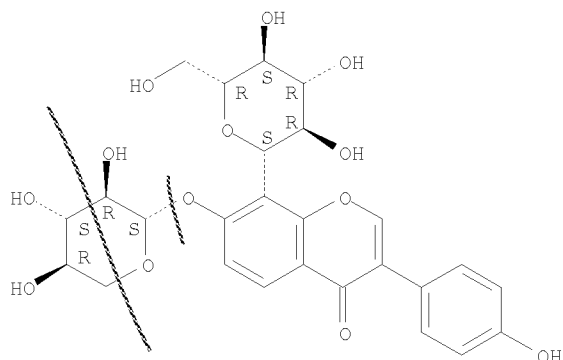
RN 303114-83-2 CAPLUS

McIntosh

10/563,471

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)-7-( $\beta$ -D-xylopyranosyloxy)- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 54 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1999:382906 CAPLUS

DN 131:179773

TI Improvement of ocular blood flow and retinal functions with puerarin analogs

AU Xuan, Bo; Zhou, Yue-Hua; Yang, Rua-Lin; Li, Na; Min, Zhi-Da; Chiou, George C. Y.

CS Institute of Ocular Pharmacology and Department of Medical Pharmacology and Toxicology, Texas A&M Health Science Center, College of Medicine, College Station, TX, USA

SO Journal of Ocular Pharmacology and Therapeutics (1999), 15(3), 207-216  
CODEN: JOPTFU; ISSN: 1080-7683

PB Mary Ann Liebert, Inc.

DT Journal

LA English

AB Ischemic retinopathy and, particularly, age-related macular degeneration (AMD) are difficult eye diseases to treat. Since the etiol. of these diseases is inadequate blood circulation in the retina and choroid, drugs which can improve blood circulation to these tissues should be beneficial to these diseases. Since fovea is a vascular, AMD is closely related to choroidal vascular abnormalities, and drugs which show strong effects to increase choroidal blood flow would be particularly useful. Puerarin and all its derivs., except ET (puerarin disubstituted with -CH<sub>2</sub>CH<sub>2</sub>OH), showed marked increase of choroidal blood flow at various time periods. Even ET showed a tendency to increase choroidal blood flow, though it was not statistically significant. As for b-wave recovery, all puerarin analogs showed strong recovery of retinal function after ischemic insult for 30 min. These results indicate that puerarin analogs could be used for the treatment of ischemic retinopathy, and AMD in particular.

IT 69655-50-1 240131-04-8 240131-05-9  
240131-07-1

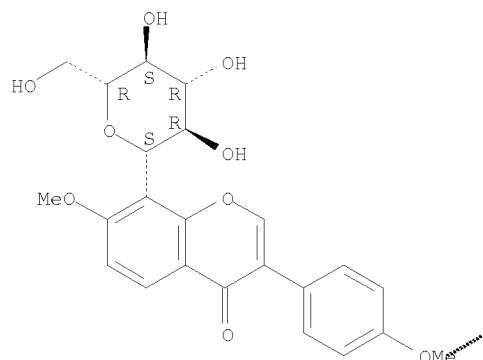
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(improvement of ocular blood flow and retinal functions with puerarin analogs)

RN 69655-50-1 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-methoxy-3-(4-methoxyphenyl)- (CA INDEX NAME)

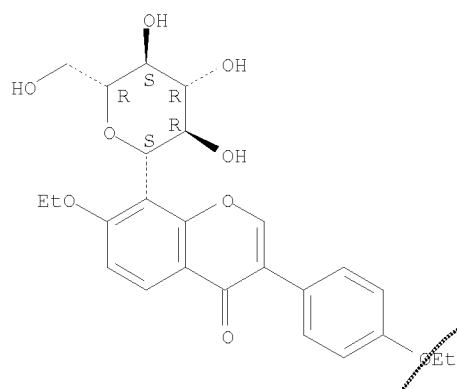
Absolute stereochemistry.

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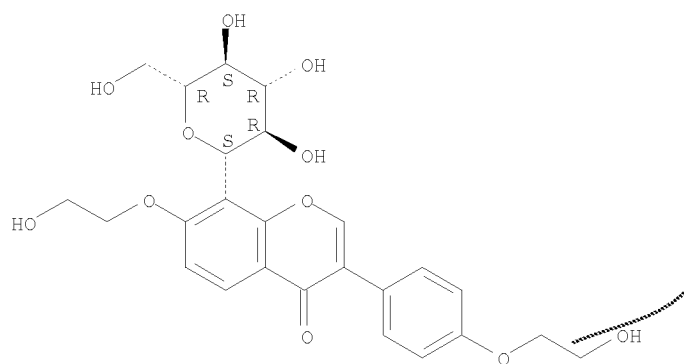
RN 240131-04-8 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-ethoxy-3-(4-ethoxyphenyl)-8- $\beta$ -D-glucopyranosyl- (CA INDEX NAME)

Absolute stereochemistry.



RN 240131-05-9 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-(2-hydroxyethoxy)-3-[4-(2-hydroxyethoxy)phenyl]- (CA INDEX NAME)

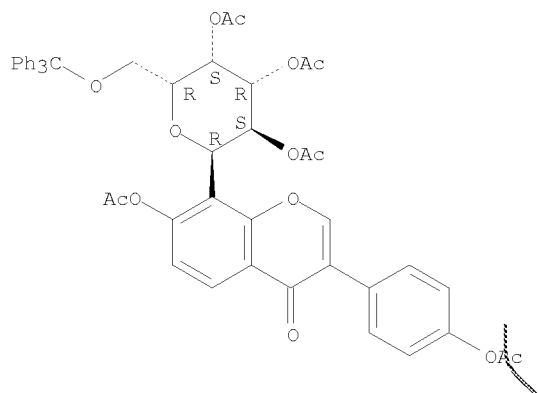
Absolute stereochemistry.



RN 240131-07-1 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[4-(acetyloxy)phenyl]-8-[2,3,4-tri-O-acetyl-6-O-(triphenylmethyl)- $\alpha$ -D-galactopyranosyl]- (CA INDEX NAME)

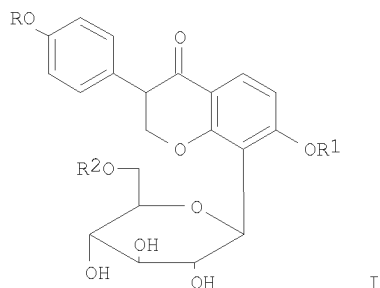
Absolute stereochemistry.

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RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 55 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1999:353528 CAPLUS  
DN 131:199898  
TI Preparation and bioactivity of puerarin derivatives  
AU Yang, Ruolin; Li, Na; Bo, Xuan; Chiou, George C. Y.; Min, Zhida  
CS Department of Natural Pharmaceutical Chemistry, China Pharmaceutical  
University, Nanjing, 210009, Peop. Rep. China  
SO Zhongguo Yaoke Daxue Xuebao (1999), 30(2), 81-85  
CODEN: ZHYXE9; ISSN: 1000-5048  
PB Zhongguo Yaoke Daxue  
DT Journal  
LA Chinese  
GI



AB Title compds. I (R = CH<sub>3</sub>, CH<sub>3</sub>CH<sub>2</sub>, H, HOCH<sub>2</sub>CH<sub>2</sub>; R<sub>1</sub> = CH<sub>3</sub>, CH<sub>3</sub>CH<sub>2</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>OH, H; R<sub>2</sub> = H, COC<sub>6</sub>H<sub>5</sub>, C(C<sub>6</sub>H<sub>5</sub>)<sub>3</sub>) were prepared from puerarin (active component in *Pueraria lobata* (Willd.) Ohwi) in enhancing bioactivities. The new derivs. were named as 7,4'-di-O-Et puerarin (G2), 4'-O-Et puerarin (G3), 4'-O-iso-Pr puerarin (G4), 4'-O-ethoxycarbonylmethylene puerarin (G5), 4'-O-methoxymethylene puerarin (G6), 7, 4'-di-O-hydroxyethyl puerarin (G7), 6'-O-benzoyl puerarin (G8) and 6''-tribenzylmethyl puerarin (G9). The two known derivs. were 7,4'-di-O-Me puerarin (G1) and hexa-O-acetyl puerarin (G10). Effects of G9 and G10 on the blood flow in the choroid, retina, ciliary body and iris of New Zealand rabbit were studied and their effects were better than those of puerarin.

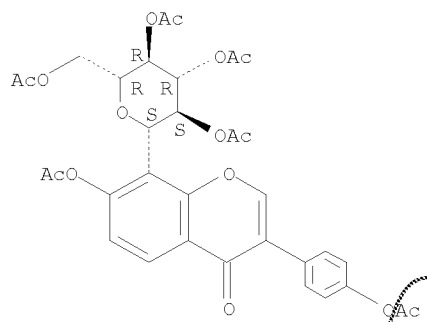
IT 2889-07-8P 69655-50-1P 240131-04-8P  
240131-05-9P 241824-63-5P 241824-64-6P  
241824-65-7P 241824-66-8P  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
(preparation and bioactivity of puerarin derivs.)

RN 2889-07-8 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[4-(acetyloxy)phenyl]-8-(2,3,4,6-

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tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

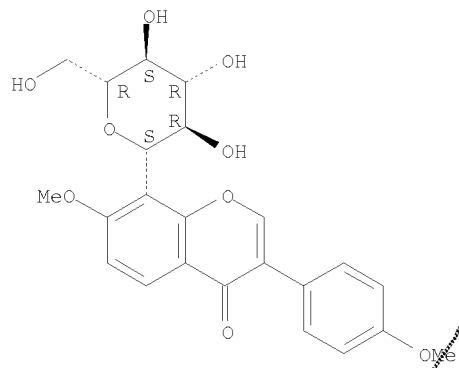
Absolute stereochemistry.



RN 69655-50-1 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-methoxy-3-(4-methoxyphenyl)- (CA INDEX NAME)

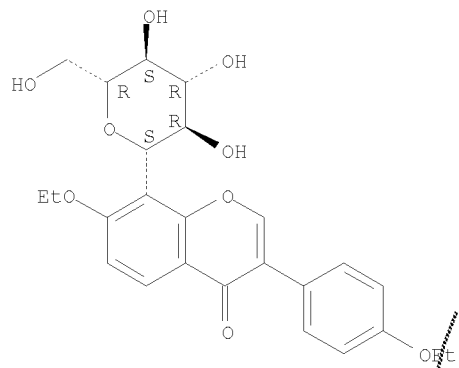
Absolute stereochemistry.



RN 240131-04-8 CAPLUS

CN 4H-1-Benzopyran-4-one, 7-ethoxy-3-(4-ethoxyphenyl)-8- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



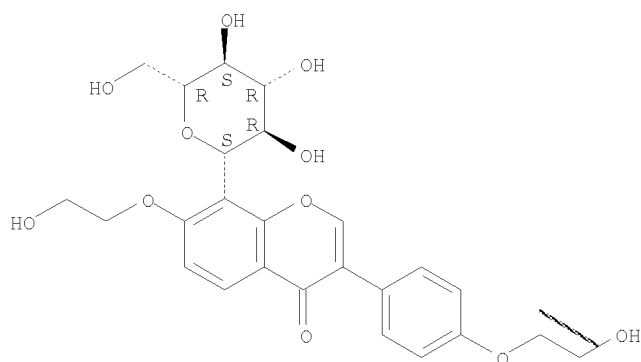
RN 240131-05-9 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-(2-hydroxyethoxy)-3-[4-(2-hydroxyethoxy)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.

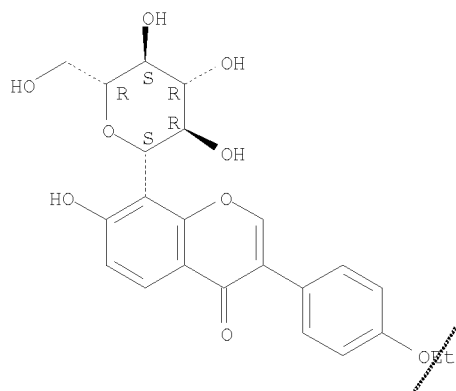
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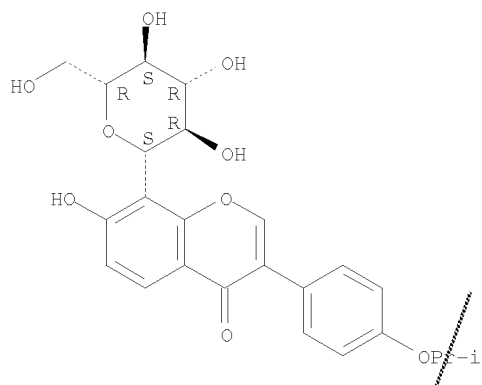
RN 241824-63-5 CAPLUS  
CN 4H-1-Benzopyran-4-one, 3-(4-ethoxyphenyl)-8- $\beta$ -D-glucopyranosyl-7-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.



RN 241824-64-6 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-[4-(1-methylethoxy)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.

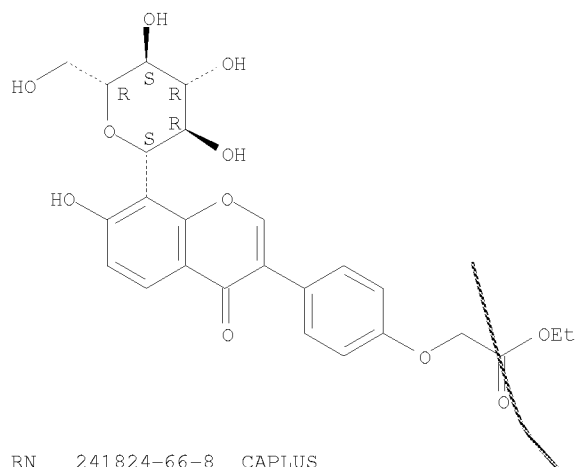


RN 241824-65-7 CAPLUS  
CN Acetic acid, [4-(8- $\beta$ -D-glucopyranosyl-7-hydroxy-4-oxo-4H-1-benzopyran-3-yl)phenoxy]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

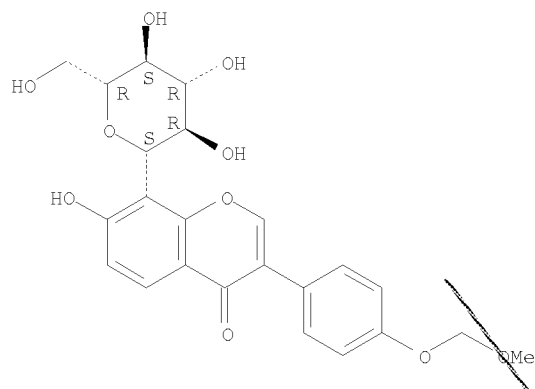
McIntosh

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RN 241824-66-8 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-[4-(methoxymethoxy)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.



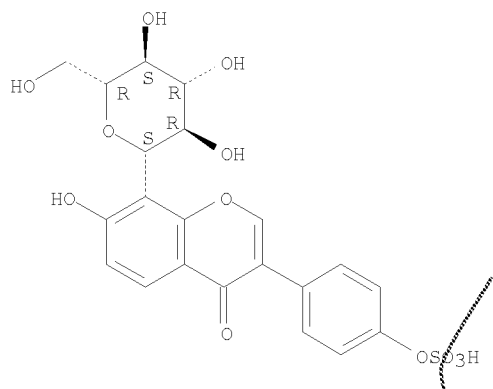
L9 ANSWER 56 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1999:30508 CAPLUS  
DN 130:246227  
TI Urinary and biliary metabolites of daidzin, daidzein and puerarin in rats  
AU Yasuda, Takaaki; Ohsawa, Keisuke  
CS Tohoku College of Pharmacy, Miyagi, 981, Japan  
SO International Congress Series (1998), 1157(Towards Natural Medicine Research in the 21st Century), 273-283  
CODEN: EXMDA4; ISSN: 0531-5131  
PB Elsevier Science B.V.  
DT Journal  
LA English  
AB In this study the urinary and biliary metabolites (M1-M7) of orally administered daidzin, daidzein and puerarin (major ingredients of the roots of Pueraria lobata) were isolated from rats and their structures were determined. Total cumulative amts. of the metabolites excreted in the urine during 48 h and in the bile during 36 h after oral administration of daidzin, daidzein and puerarin were estimated resp.  
IT 163128-95-8 163128-96-9  
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)  
(urinary and biliary metabolites of daidzin, daidzein and puerarin in rats)  
RN 163128-95-8 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-[4-(sulfooxy)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.

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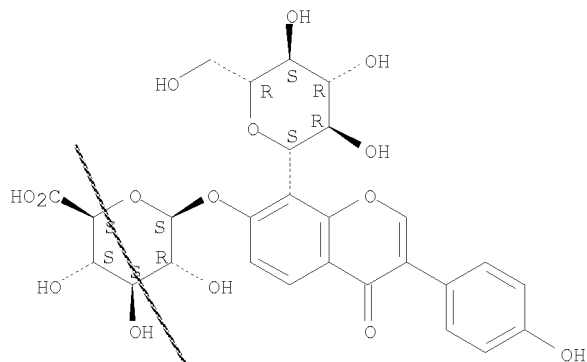


10/563,471



RN 163128-96-9 CAPLUS  
CN  $\beta$ -D-Glucopyranosiduronic acid,  
8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl  
(CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 57 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1998:697258 CAPLUS  
DN 130:85991  
TI Identification of isoflavones in the roots of Pueraria lobata  
AU Rong, Haojing; Stevens, Jan F.; Deinzer, Max L.; De Cooman, Luc; De  
Keukeleire, Denis  
CS Faculty Pharmaceutical Sciences, University Gent, Ghent, B-9000, Belg.  
SO Planta Medica (1998), 64(7), 620-627  
CODEN: PLMEAA; ISSN: 0032-0943  
PB Georg Thieme Verlag  
DT Journal  
LA English  
AB The isoflavones of the roots of P. lobata (Puerariae Radix) were  
investigated by HPLC coupled to photodiode array (PDA) and to mass  
spectroscopy (MS) using atmospheric pressure chemical ionization (APCI) or  
electrospray ionization (ESI) in combination with collision-activated  
decomposition (CAD) (HPLC-APCI-CAD-MS or ESI-CAD-MS) for identification of  
glycosides and HPLC-APCI-CAD-MS for identification of aglycons. The major  
glycosides are derived from daidzein and most are 8-C-glycosides.  
3'-Hydroxypuerarin 4'-O-deoxyhexoside and  
3'-methoxy-6''-O-D-xylosylpuerarin were identified as new constituents.  
MS data were obtained for puerarin-4'-O-D-glucoside, 3'-hydroxypuerarin,  
puerarin, 3'-methoxypuerarin, 6''-O-D-xylosylpuerarin, daidzin and  
3'-methoxydaidzin, which were previously characterized by NMR anal.  
Isoflavones identified in Puerariae Radix comprise 3'-methoxydaidzein,  
genistein, daidzein 7-O-Me ether, 3'-methoxydaidzein 7-O-Me ether or

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3'-methoxyformononetin and biochanin A, while previous characterization of daidzein and formononetin was substantiated by MS data. The structure of one compound could not be established by MS techniques. The estrogenic activity was mainly located in the aglycon fraction.

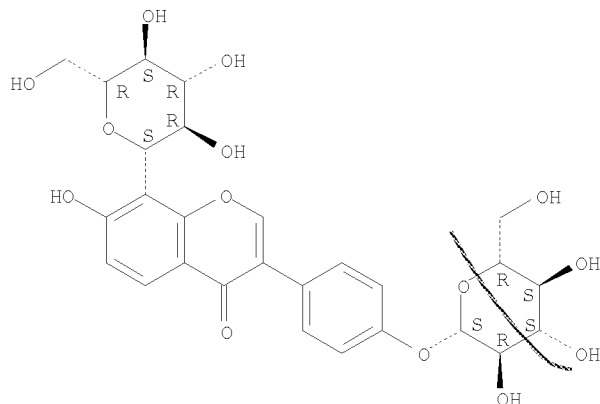
IT 117047-08-2P

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)  
(isoflavones of roots of *Pueraria lobata*)

RN 117047-08-2 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-3-[4-( $\beta$ -D-glucopyranosyloxy)phenyl]-7-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 58 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1996:167556 CAPLUS

DN 124:352436

OREF 124:65253a,65256a

TI *Pueraria lobata*. A medicinal plant against alcoholism?

AU Saller, Reinhard; Reichling, Juergen

CS Dep. Inn. Med., Univ. Zuerich, Zurich, CH-8091, Switz.

SO Deutsche Apotheker Zeitung (1996), 136(9), 25-7

CODEN: DAZE2; ISSN: 0011-9857

PB Deutscher Apotheker Verlag

DT Journal

LA German

AB The origin, the content, the pharmacol. effects and the inhibition of alc. metabolism of the Chinese drug *Pueraria lobata* is presented.

IT 117047-08-2

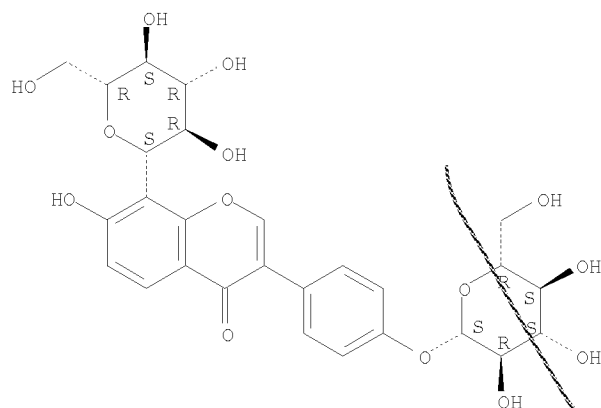
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)  
(crude drugs from *Pueraria* roots against alcoholism)

RN 117047-08-2 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-3-[4-( $\beta$ -D-glucopyranosyloxy)phenyl]-7-hydroxy- (CA INDEX NAME)

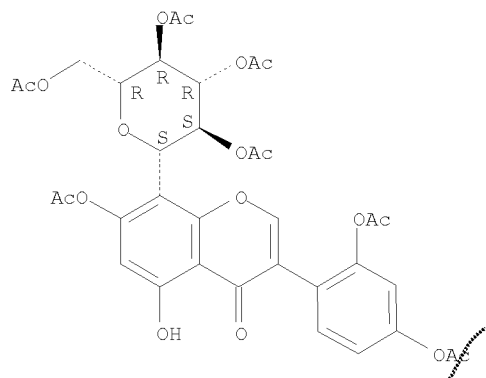
Absolute stereochemistry.

10/563,471



L9 ANSWER 59 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1996:116266 CAPLUS  
DN 124:170642  
OREF 124:31555a,31558a  
TI A new isoflavone C-glycoside from *Cassia siamea*  
AU Shafiullah, M.; Parveen, M.; Kamil, M.; Ilyas, M.  
CS Department Chemistry, Aligarh Muslim University, Aligarh, 202002, India  
SO Fitoterapia (1995), 66(5), 439-41  
CODEN: FTRPAE; ISSN: 0367-326X  
PB Inverni della Beffa SpA  
DT Journal  
LA English  
AB A novel isoflavone glycoside was isolated from the leaves of *C. siamea* and characterized as 2',4',5,7-tetrahydroxy-8-C-glucosylisoflavone (2'-hydroxygenistein 8-C-glucoside) .  
IT 173866-80-3P 173866-81-4P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and properties of)  
RN 173866-80-3 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[2,4-bis(acetyloxy)phenyl]-5-hydroxy-8-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

Absolute stereochemistry.

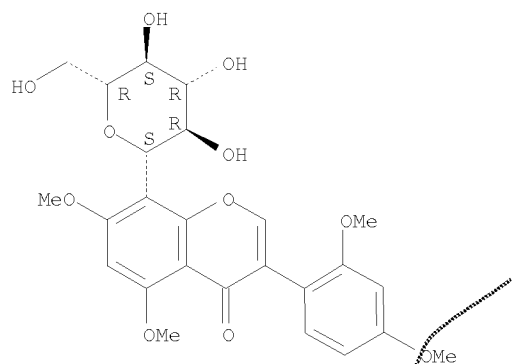


RN 173866-81-4 CAPLUS  
CN 4H-1-Benzopyran-4-one, 3-(2,4-dimethoxyphenyl)-8- $\beta$ -D-glucopyranosyl-5,7-dimethoxy- (CA INDEX NAME)

Absolute stereochemistry.

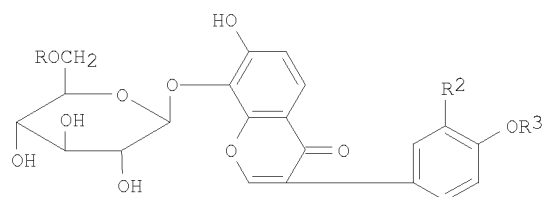
McIntosh

10/563,471



L9 ANSWER 60 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1995:808056 CAPLUS  
DN 123:208469  
OREF 123:36939a,36942a  
TI Skin-lightening cosmetics containing isoflavone glucosides extracted from  
Pueraria lobata roots  
IN Shibuya, Jusuke; Nishizawa, Yoshinori  
PA Kao Corp, Japan  
SO Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07157494	A	19950620	JP 1993-305073	19931206
	JP 3271840	B2	20020408		
PRAI	JP 1993-305073		19931206		
OS	MARPAT 123:208469				
GI					



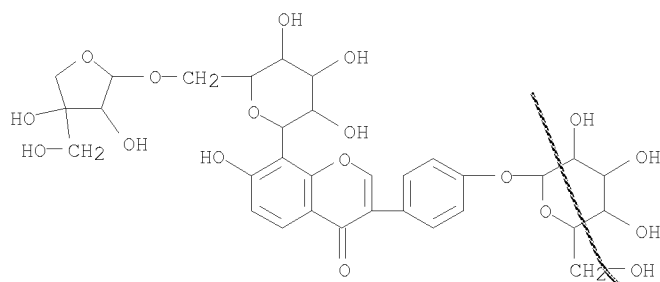
I

AB Skin-lightening cosmetics contain isoflavone glycosides (I) [R1 = apiosyl, glucosyl or H; R2 = H or OH; R3 = H or glucosyl] extracted from P. lobata roots. As an example, a cream contained glycerol monostearate 5.0, polyethylene glycol monostearate 2.0, squalane 8.0, glycerol trioctanoate 8.0, stearyl alc. 5.5, di-Me polysiloxane 0.2, propylene glycol 5.0, di-Na EDTA 0.1, kojic acid 1.5, 6'-O-apiosylpuerarin-4'-O-glucoside 0.2, Na citrate 1.0, preservatives, perfumes, and ion-exchanged water to 100%. The compns. also prevented sunlight-related liver-spot and ephelis.

IT 168035-01-6P  
RL: BUU (Biological use, unclassified); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(Skin-lightening cosmetics containing isoflavone glucosides extracted from Pueraria lobata roots)

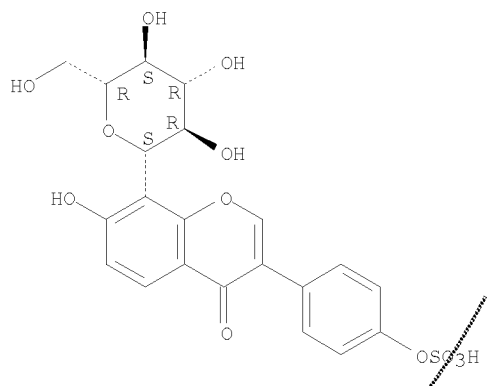
RN 168035-01-6 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8-(6-O-D-apio- $\beta$ -D-furanosyl- $\beta$ -D-glucopyranosyl)-3-[4-( $\beta$ -D-glucopyranosyloxy)phenyl]-7-hydroxy- (CA INDEX NAME)

McIntosh



L9 ANSWER 61 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1995:441848 CAPLUS  
 DN 122:281356  
 OREF 122:51003a,51006a  
 TI Urinary and biliary metabolites of puerarin in rats  
 AU Yasuda, Takaaki; Kano, Yoshihiro; Saito, Ken-ichi; Ohsawa, Keisuke  
 CS Tohoku Coll. Pharm., Sendai, 981, Japan  
 SO Biological & Pharmaceutical Bulletin (1995), 18(2), 300-3  
 CODEN: BPBLEO; ISSN: 0918-6158  
 PB Pharmaceutical Society of Japan  
 DT Journal  
 LA English  
 AB Examination was made of the urinary and biliary excretion of the metabolites of puerarin, the major component of the roots of *Pueraria lobata* Ohwi (Leguminosae) in rats. The urine of rats administered puerarin orally contained puerarin and four major metabolites, daidzein 4',7-di-O-sulfate (M-I), daidzein 7-O- $\beta$ -D-glucuronide (M-II), daidzein 4'-O-sulfate (M-III), daidzein (M-IV), as determined from spectroscopic and chemical data. Total cumulative amts. of the puerarin and four metabolites excreted in the urine at 48 h following the oral administration of puerarin were approx. 3.6% the doses administered. The bile of rats administered puerarin orally contained puerarin and two major metabolites, which were identified as puerarin 4'-O-sulfate (PB1) and puerarin 7-O- $\beta$ -D-glucuronide (PB2) on the basis of chemical and spectroscopic data. These exptl. data suggest that C-glycoside puerarin is partially hydrolyzed to aglycon in the body, but mainly excreted in the urine as unchanged puerarin.  
 IT 163128-95-8 163128-96-9  
 RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)  
 (puerarin urinary and biliary metabolites)  
 RN 163128-95-8 CAPLUS  
 CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-[4-(sulfooxy)phenyl]- (CA INDEX NAME)

Absolute stereochemistry.

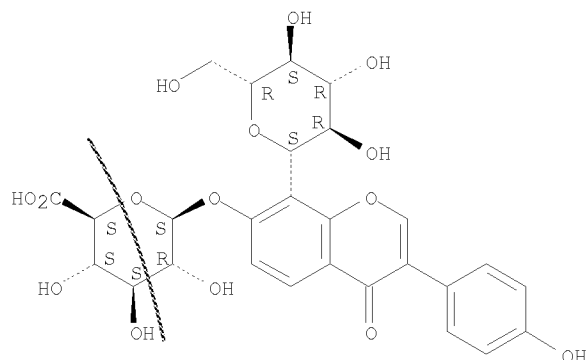


RN 163128-96-9 CAPLUS  
 CN  $\beta$ -D-Glucopyranosiduronic acid,  
 8- $\beta$ -D-glucopyranosyl-3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl

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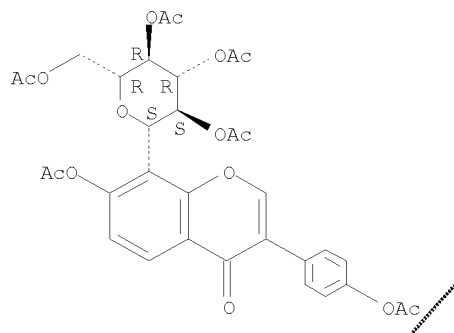
(CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 62 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1994:8844 CAPLUS  
DN 120:8844  
OREF 120:1949a,1952a  
TI The rotational isomers of peracetylated C-glycosylflavones  
AU Kato, Takeshi; Morita, Yutaka  
CS Fac. Pharm. Sci., Josai Univ., Sakado, 350-02, Japan  
SO Heterocycles (1993), 35(2), 965-73  
CODEN: HTCYAM; ISSN: 0385-5414  
DT Journal  
LA English  
AB In <sup>1</sup>H and <sup>13</sup>C NMR of peracetylated 8-C- and 6-C-glycosylflavones, the signal doublings were observed due to the restricted rotation of the acetylated glucosyl moiety. The conformations of rotational isomers of hepta-O-acetyl vitexin and octa-O-acetyl orientin were decided as +sp (major) and -s.c. (minor) for both compds. by NMR (CDCl<sub>3</sub>) spectral data. The characteristic chemical shift phenomena in NMR of glycosylflavonoid could be applicable to differentiate 8-C-glucoside from 6-C-glucoside.  
IT 2889-07-8  
RL: PRP (Properties)  
(conformation of, NMR in relation to)  
RN 2889-07-8 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[4-(acetyloxy)phenyl]-8-(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



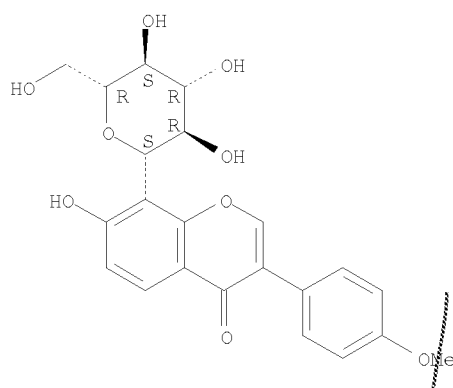
L9 ANSWER 63 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1993:525006 CAPLUS  
DN 119:125006  
OREF 119:22302h,22303a  
TI The solubility and complex-solubilization of puerarin  
AU Wang, Cheng; Liu, Yuling; Su, Shijie

McIntosh

10/563,471

CS Inst. Materia Med., Chin. Acad. Med. Sci., Beijing, 100050, Peop. Rep. China  
SO Zhongguo Yaoxue Zazhi (Beijing, China) (1993), 28(5), 294-6  
CODEN: ZYZAEU; ISSN: 1001-2494  
DT Journal  
LA Chinese  
AB The solubility of puerarin in aqueous solns. was increased with pH values at pH  $\geq 7.5$  and in the presence of methoxypuerarin. Amino acids (e.g. lysine, histidine, and arginine), nicotinamide, and PVP markedly increased the solubility of puerarin, which may be used as solubilizers in the formulation of puerarin injections.  
IT 92117-94-7  
RL: BIOL (Biological study)  
(puerarin solubility in aqueous solution increase by)  
RN 92117-94-7 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-(4-methoxyphenyl)- (CA INDEX NAME)

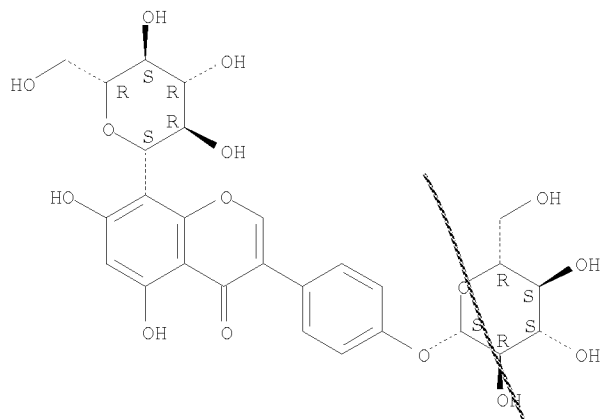
Absolute stereochemistry.



L9 ANSWER 64 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1993:251489 CAPLUS  
DN 118:251489  
OREF 118:43583a,43586a  
TI Leguminous plants . XXXIX. Three new isoflavonoid glycosides from *Lupinus luteus* and *L. polyphyllus* + *arboreus*  
AU Watanabe, Kazutaka; Kinjo, Junei; Nohara, Toshihiro  
CS Fac. Pharm. Sci., Kumamoto Univ., Kumamoto, 862, Japan  
SO Chemical & Pharmaceutical Bulletin (1993), 41(2), 394-6  
CODEN: CPBTAL; ISSN: 0009-2363  
DT Journal  
LA English  
AB From *Lupinus luteus* and *L. polyphyllus* + *arboreus* hybrid, three new isoflavonoid glycosides were isolated together with six known ones. The new compds. were: 8-C-glucopyranosylgenistein 4'-O-glucopyranoside, 5-O-methylgenistein 4',7-di-O-glucopyranoside, and 2'-hydroxygenistein 4',7-di-O-glucopyranoside. The isoflavonoid distributions in the two species were differed.  
IT 147879-67-2  
RL: BIOL (Biological study)  
(from *Lupinus* species and hybrids, isolation and structure of)  
RN 147879-67-2 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-3-[4-( $\beta$ -D-glucopyranosyloxy)phenyl]-5,7-dihydroxy- (CA INDEX NAME)

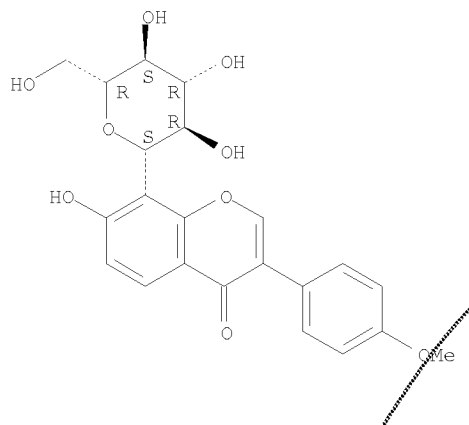
Absolute stereochemistry.

10/563,471



L9 ANSWER 65 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1991:542430 CAPLUS  
DN 115:142430  
OREF 115:24295a,24298a  
TI Determination of 4'-methoxy-puerrarin in puerrarin by reversed phase HPLC  
AU Xu, L. X.; Zhang, X. Q.; Liu, A. R.  
CS Inst. Materia Med., Chin. Acad. Med. Sci., Beijing, 100050, Peop. Rep. China  
SO Yaoxue Xuebao (1991), 26(6), 475-9  
CODEN: YHHPAL; ISSN: 0513-4870  
DT Journal  
LA English  
AB A reversed-phase HPLC based on a LiChrosorb Rp-18 column and EtOH-H<sub>2</sub>O (10:90) mobile phase was developed for determination of 4'-methoxypuerarin (I) in quality control of puerarin. A linear relation was found between the ratio of peak height and the amount of I over the range 0.8-2.5  $\mu$ g. Recoveries were 93.2-97.5%.  
IT 92117-94-7, 4'-Methoxypuerarin  
RL: ANT (Analyte); ANST (Analytical study)  
(determination of, in puerarin, by HPLC)  
RN 92117-94-7 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-(4-methoxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.



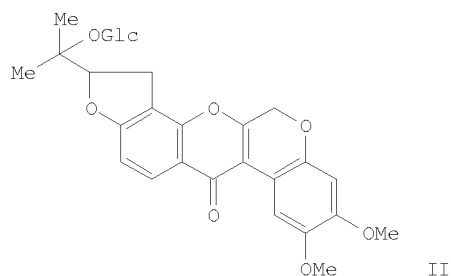
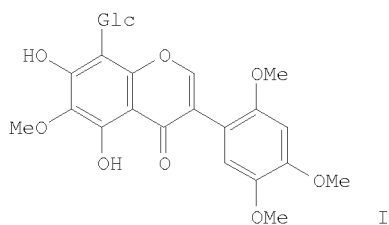
L9 ANSWER 66 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1991:244252 CAPLUS  
DN 114:244252  
OREF 114:41153a,41156a  
TI Dalpaniculin, a C-glycosylisoflavone from Dalbergia paniculata seeds  
AU Rao, J. Rajasekhara; Rao, R. Srinivasa  
CS Post-Grad. Cent., Sri Venkateswara Univ., Cuddapah, 516 004, India

McIntosh



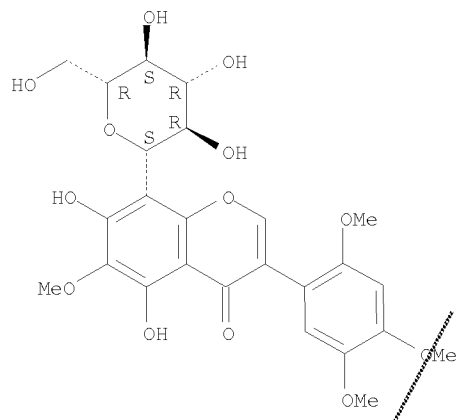
10/563,471

SO Phytochemistry (1991), 30(2), 715-16  
CODEN: PYTCAS; ISSN: 0031-9422  
DT Journal  
LA English  
GI



AB Further examination of seeds of *D. paniculata* has yielded (+)-pinitol, caviunin 7-O-rhamnoglucoside, isocaviunin 7-O-glucoside and two new compds.: a C-glycosylisoflavone, dalpaniculin (I, Glc =  $\beta$ -D-glucopyranosyl), and an O-glycosyldehydrotenoid, dehydrodalpanol O-glucoside (II).  
IT 133956-26-0, Dalpaniculin  
RL: PROC (Process)  
(from *Dalbergia paniculata*, mol. structure determination of)  
RN 133956-26-0 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-5,7-dihydroxy-6-methoxy-3-(2,4,5-trimethoxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.

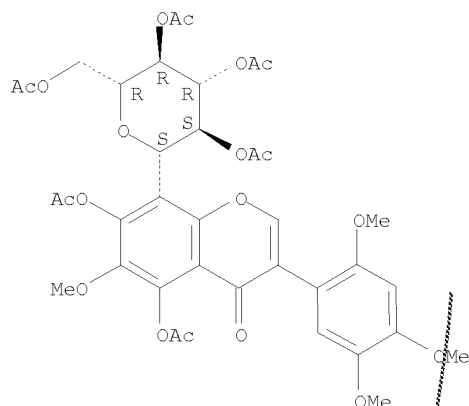


IT 133956-28-2P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 133956-28-2 CAPLUS  
CN 4H-1-Benzopyran-4-one, 5,7-bis(acetyloxy)-6-methoxy-8-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)-3-(2,4,5-trimethoxyphenyl)- (CA INDEX NAME)

McIntosh

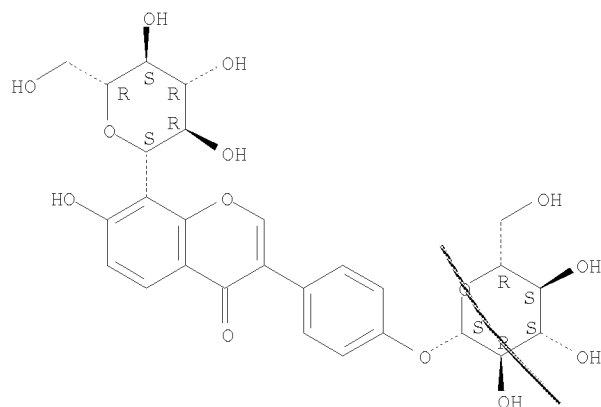
10/563,471

Absolute stereochemistry.



L9 ANSWER 67 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1988:576147 CAPLUS  
DN 109:176147  
OREF 109:29103a,29106a  
TI Isolation and high performance liquid chromatography (HPLC) of  
isoflavonoids from the Pueraria root  
AU Ohshima, Yukio; Okuyama, Toru; Takahashi, Kunio; Takizawa, Toshio;  
Shibata, Shoji  
CS Meiji Coll. Pharm., Tokyo, 154, Japan  
SO Planta Medica (1988), 54(3), 250-4  
CODEN: PLMEAA; ISSN: 0032-0943  
DT Journal  
LA English  
AB From the Chinese drug Gegen (the roots of *P. lobata* or *P. pseudohirsuta*),  
several isoflavonoid compds. were isolated. Besides the known compds.  
(puerarin, daidzin, daidzein, and formononetin), the presence of pueraria  
glycosides (PG) 1, 2, 3, and 6 and puerarol in the Pueraria root exts. was  
revealed by HPLC. The chemical structures of PG-1, 2, 3, and 6 as well as  
puerarol were supported by spectral data.  
IT 117047-08-2  
RL: BIOL (Biological study)  
(from Pueraria lobata roots)  
RN 117047-08-2 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-3-[4-( $\beta$ -D-  
glucopyranosyloxy)phenyl]-7-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.



IT 116994-28-6P 117008-18-1P 117047-05-9P

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117047-06-0P 117047-08-2DP, acetylated

117047-09-3P 117047-10-6P

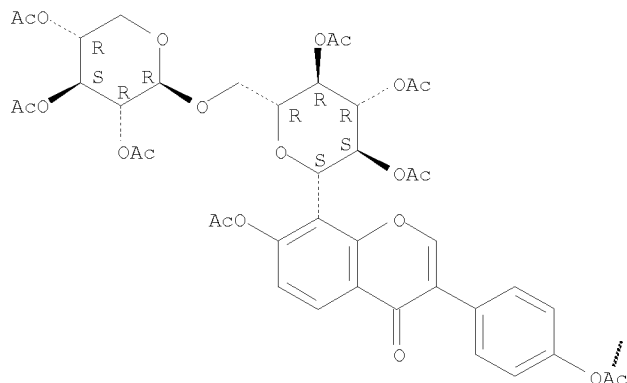
RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

RN 116994-28-6 CAPLUS

CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[4-(acetyloxy)phenyl]-8-[2,3,4-tri-O-acetyl-6-O-(2,3,4-tri-O-acetyl- $\beta$ -D-xylopyranosyl)- $\beta$ -D-glucopyranosyl]- (CA INDEX NAME)

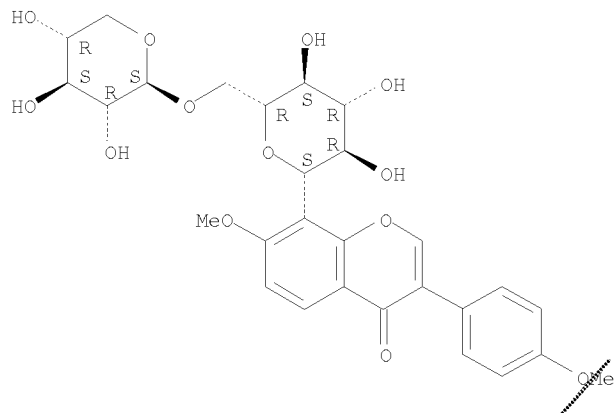
Absolute stereochemistry.



RN 117008-18-1 CAPLUS

CN 4H-1-Benzopyran-4-one, 7-methoxy-3-(4-methoxyphenyl)-8-(6-O- $\beta$ -D-xylopyranosyl)- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



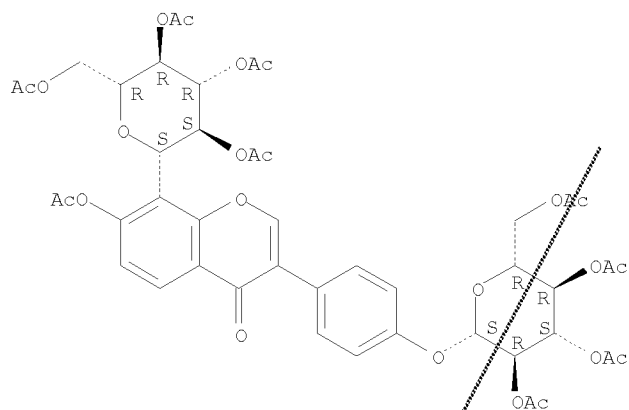
RN 117047-05-9 CAPLUS

CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-8-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)-3-[4-[(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)oxy]phenyl]- (CA INDEX NAME)

Absolute stereochemistry.

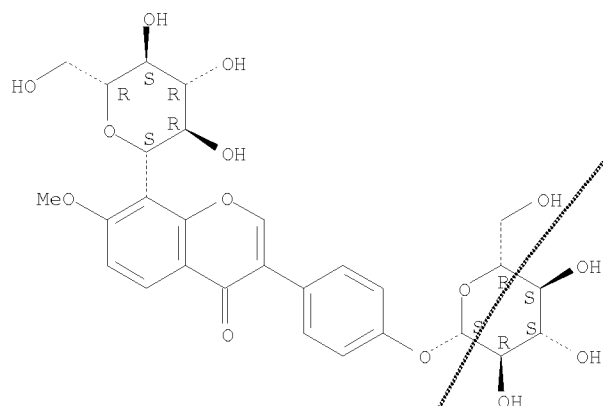
McIntosh

10/563,471



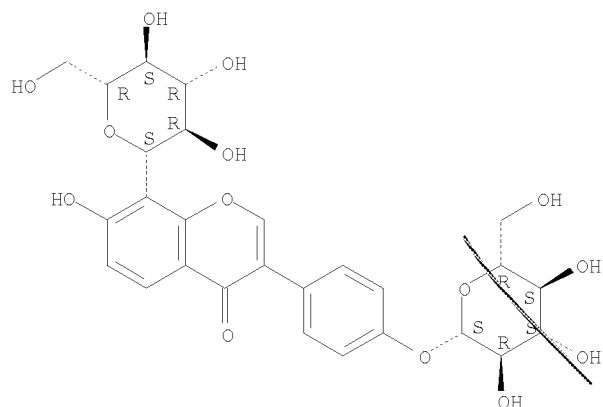
RN 117047-06-0 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-3-[4-(β-D-glucopyranosyloxy)phenyl]-7-methoxy- (CA INDEX NAME)

Absolute stereochemistry.



RN 117047-08-2 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-3-[4-(β-D-glucopyranosyloxy)phenyl]-7-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.



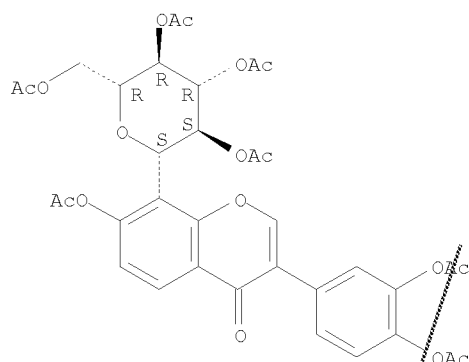
RN 117047-09-3 CAPLUS

McIntosh

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CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[3,4-bis(acetyloxy)phenyl]-8-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

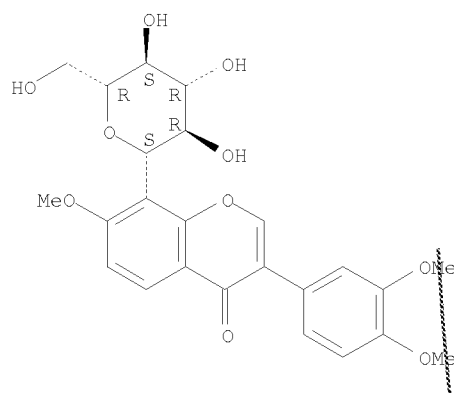
Absolute stereochemistry.



RN 117047-10-6 CAPLUS

CN 4H-1-Benzopyran-4-one, 3-(3,4-dimethoxyphenyl)-8- $\beta$ -D-glucopyranosyl-7-methoxy- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 68 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1984:537094 CAPLUS

DN 101:137094

OREF 101:20757a,20760a

TI HPLC determination of isoflavones in Ge Gen (*Radix Puerariae*) and its tablets

AU Zhang, Yuzhong; Yang, Fan

CS Inst. Chin. Mater. Med., Acad. Tradit. Chin. Med., Peop. Rep. China

SO Yaowu Fenxi Zazhi (1984), 4(2), 67-70

CODEN: YFZADL; ISSN: 0254-1793

DT Journal

LA Chinese

AB Daidzein 4',7-diglucoside [53681-67-7], puerarin [3681-99-0], 4'-methoxypuerarin [92117-94-7], daidzin [552-66-9] and daidzein [486-66-8] in Ge Gen (*Puerariae* roots) or their tablets were determined by HPLC (Zorbax ODS as stationary phase; MeOH-H<sub>2</sub>O (32:68) as mobile phase). As an example, 0.1 g powder was extracted with 70% EtOH (10 mL), and 1 mL of the extract was diluted with MeOH with addition of internal standard A 0.6- $\mu$ L solution was subjected to anal. by HPLC. The retention time was 7.94, 12.97, 14.29, 20.09 and 53.76 min, resp. Contents of various isoflavones in roots of *P. lobata* from various locations in China ranged 0.0155-2.002, 0.108-5.749, 0.2411-1.908, 0.0175-1.393 and 0.049-0.155%, resp. No pretreatment of crude samples was required. The method was simple and rapid and only a small amount of samples was required in anal.

IT 92117-94-7

McIntosh

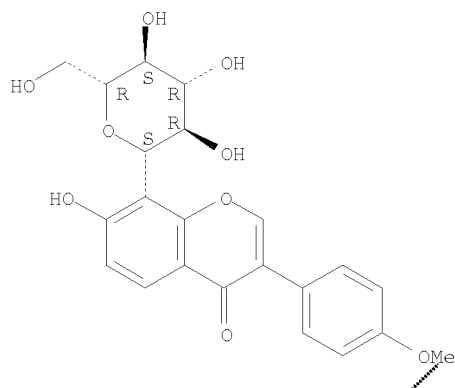
RL: ANT (Analyte); ANST (Analytical study)

(determination of, in Pueraria roots and their tablet preps. by HPLC)

RN 92117-94-7 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-hydroxy-3-(4-methoxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 69 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1979:138107 CAPLUS

DN 90:138107

OREF 90:21913a,21916a

TI C-glycosylflavonoids. II. The synthesis of 7,4'-di-O-methylpuerarin (8-C- $\beta$ -D-glucopyranosyl-7,4'-dimethoxyisoflavone)

AU Eade, Ronald A.; McDonald, Francis J.; Huu Phung Pham

CS Sch. Chem., Univ. New South Wales, Kensington, Australia

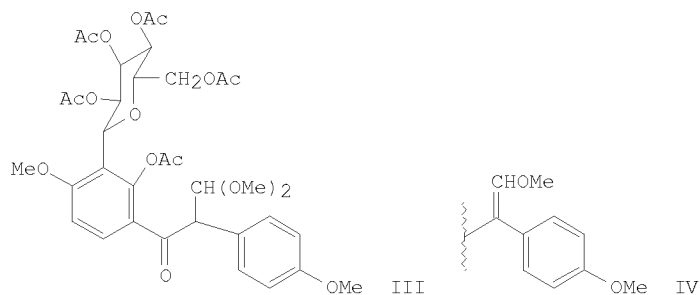
SO Australian Journal of Chemistry (1978), 31(12), 2699-706

CODEN: AJCHAS; ISSN: 0004-9425

DT Journal

LA English

GI



AB The product of reaction of 2'-acetoxy-4,4'-dimethoxy-3'-(tetraacetyl- $\beta$ -D-glucopyranosyl)chalcone (I) with  $\text{Ti}(\text{NO}_3)_3$  in  $\text{MeOH}-\text{CH}(\text{OMe})_3$  solution gave, after acid hydrolysis, a high yield of 7,4'-di-O-methylpuerarin (II). The di-Me acetal (III) and the enol ether (IV) were isolated from the reaction of I with  $\text{Ti}(\text{NO}_3)_3$  in  $\text{MeOH}$ . Both III and IV gave II on reaction with acid or base.

IT 69655-50-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

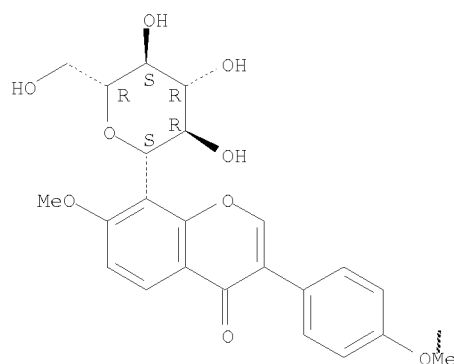
(preparation and oxidative rearrangement of, puerarin derivative from)

RN 69655-50-1 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-7-methoxy-3-(4-methoxyphenyl)- (CA INDEX NAME)

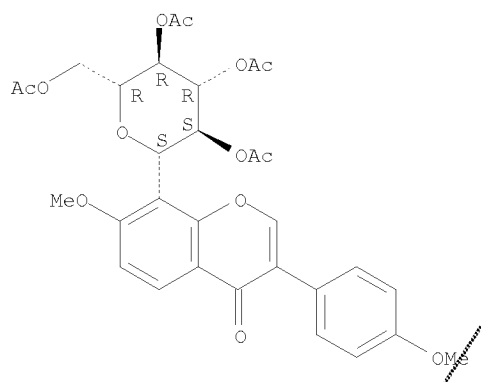
Absolute stereochemistry.

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IT 69655-53-4P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 69655-53-4 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-methoxy-3-(4-methoxyphenyl)-8-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

Absolute stereochemistry.

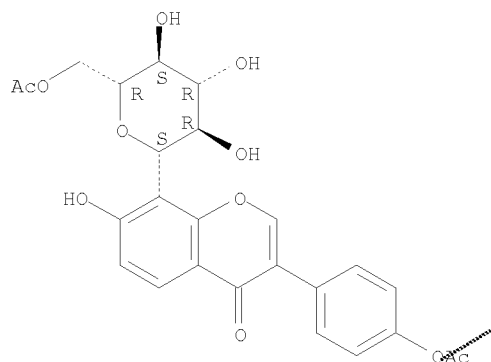


L9 ANSWER 70 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1978:101558 CAPLUS  
DN 88:101558  
OREF 88:15897a,15900a  
TI The C-flavonoides from *Sarothamnus scoparius*. Isolation of a new compound, 6-O-acetylscoparoside  
AU Brum-Bousquet, Michele; Tillequin, Francois; Paris, Rene Raymond  
CS Lab. Matiere Med., Fac. Sci. Pharm. Biol., Paris, Fr.  
SO Lloydia (1977), 40(6), 591-2  
CODEN: LLOYA2; ISSN: 0024-5461  
DT Journal  
LA French  
GI For diagram(s), see printed CA Issue.  
AB From *S. scoparius* leaves genitoside, scoparoside and 5 other flavones, which upon acid and alkaline hydrolysis yielded acyl and O-heteroside scoparoside derivs. One of the acrylic C-glycosylflavones was identified as 6''-O-acetylscoparoside (I).  
IT 24562-39-8P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 24562-39-8 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8-(6-O-acetyl- $\beta$ -D-glucopyranosyl)-3-[4-(acetyloxy)phenyl]-7-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.

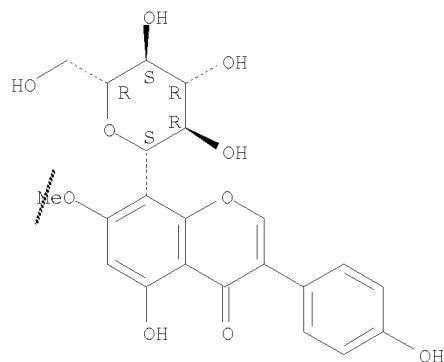
McIntosh

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L9 ANSWER 71 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1977:5750 CAPLUS  
DN 86:5750  
OREF 86:1003a,1006a  
TI TLC separation and identification of some flavonoid C-glycosides  
AU Chawla, H. M.; Chibber, S. S.  
CS Dep. Chem., Univ. Delhi, Delhi, India  
SO Chromatographia (1976), 9(8), 408-9  
CODEN: CHRGB7; ISSN: 0009-5893  
DT Journal  
LA English  
AB Thin-layer chromatog. on silica gel plates provides a method for the quant. separation and identification of isomeric flavone and isoflavone C-glycosides.  
IT 52448-12-1 58930-58-8  
RL: ANT (Analyte); ANST (Analytical study)  
(chromatog. of)  
RN 52448-12-1 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-5-hydroxy-3-(4-hydroxyphenyl)-7-methoxy- (CA INDEX NAME)

Absolute stereochemistry.



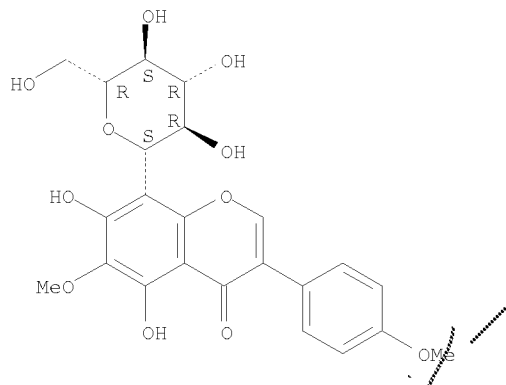
RN 58930-58-8 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-5,7-dihydroxy-6-methoxy-3-(4-methoxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.

McIntosh

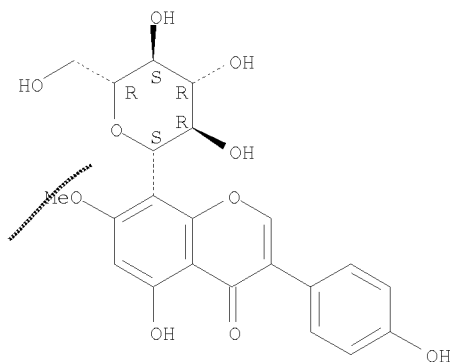


10/563,471



L9 ANSWER 72 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1976:577876 CAPLUS  
DN 85:177876  
OREF 85:28447a,28450a  
TI New isoflavonoid glycosides fom Dalbergia paniculata  
AU Parthasarathy, Madhanam R.; Seshadri, Tiruvenkata R.; Varma, Rajender S.  
CS Dep. Chem., Univ. Delhi, Delhi, India  
SO Phytochemistry (Elsevier) (1976), 15(6), 1025-7  
CODEN: PYTCAS; ISSN: 0031-9422  
DT Journal  
LA English  
AB The methanolic extract of the bark of D. paniculata gave 3 isoflavonoid glycosides 8-C-glucopyranosylpruetin and biochanin A and formononetin 7-rutinosides.  
IT 52448-12-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(of Dalbergia paniculata, structure of)  
RN 52448-12-1 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-5-hydroxy-3-(4-hydroxyphenyl)-7-methoxy- (CA INDEX NAME)

Absolute stereochemistry.

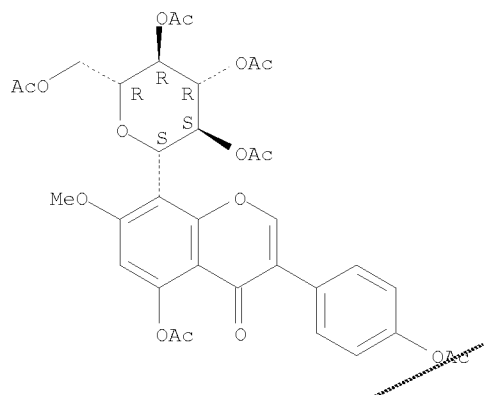


IT 52448-13-2P 60845-26-3P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 52448-13-2 CAPLUS  
CN 4H-1-Benzopyran-4-one, 5-(acetyloxy)-3-[4-(acetyloxy)phenyl]-7-methoxy-8-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

Absolute stereochemistry.

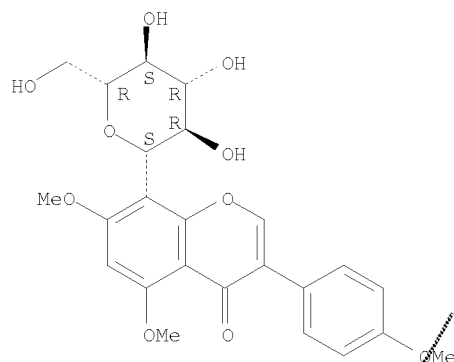
McIntosh

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RN 60845-26-3 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-5,7-dimethoxy-3-(4-methoxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.

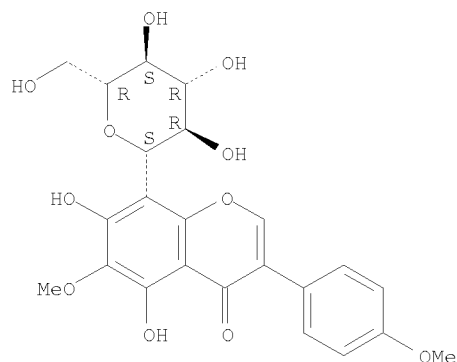


L9 ANSWER 73 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1976:147701 CAPLUS  
DN 84:147701  
OREF 84:23993a,23996a  
TI Volubilin, a new isoflavone-C-glycoside from *Dalbergia volubilis* flowers  
AU Chawla, H. M.; Chibber, S. S.; Seshadri, T. R.  
CS Dep. Chem., Univ. Delhi, Delhi, India  
SO Phytochemistry (Elsevier) (1976), 15(1), 235-7  
CODEN: PYTCAS; ISSN: 0031-9422  
DT Journal  
LA English  
GI For diagram(s), see printed CA Issue.  
AB The alc. extract of the flowers of *D. volubilis* was concentrated and refluxed in a Soxhlet apparatus with dry Et<sub>2</sub>O for 24 hr. The Et<sub>2</sub>O extract yielded biochanin A, whereas the alc. extract contained volubilin and isovolubilin. Volubilin (I) was crystallized from EtOAc-MeOH as colorless plates m.p. 159-61°. Identification was via ir, uv, NMR, and mass spectroscopy.  
IT 58930-58-8  
RL: BIOL (Biological study)  
(a new isoflavonoid glycoside)  
RN 58930-58-8 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-5,7-dihydroxy-6-methoxy-3-(4-methoxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.

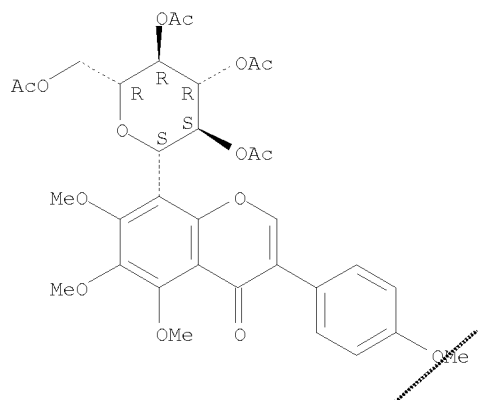
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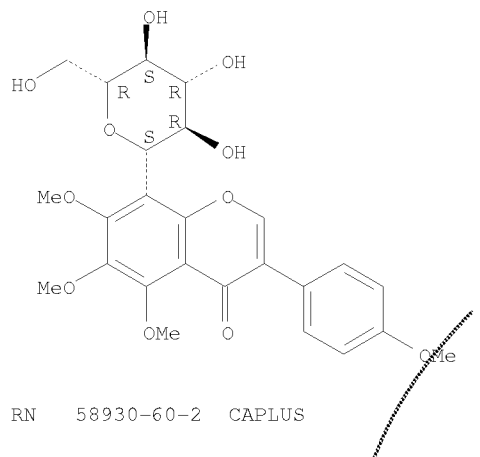
IT 58930-61-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(oxidation of)  
RN 58930-61-3 CAPLUS  
CN 4H-1-Benzopyran-4-one, 5,6,7-trimethoxy-3-(4-methoxyphenyl)-8-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



IT 58930-59-9P 58930-60-2P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 58930-59-9 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-5,6,7-trimethoxy-3-(4-methoxyphenyl)- (CA INDEX NAME)

Absolute stereochemistry.



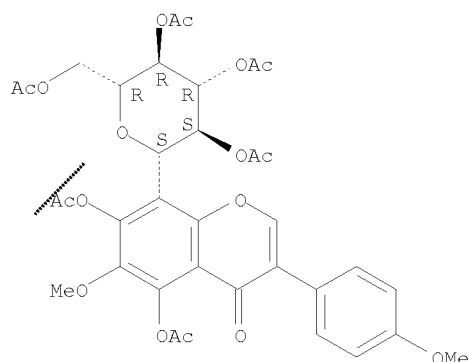
RN 58930-60-2 CAPLUS

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CN 4H-1-Benzopyran-4-one, 5,7-bis(acetyloxy)-6-methoxy-3-(4-methoxyphenyl)-8-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 74 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1974:105902 CAPLUS

DN 80:105902

OREF 80:17019a,17022a

TI Minor isoflavonoid glycosides of the stem bark of *Dalbergia paniculata*.  
Isolation of a new C-glycoside

AU Parthasarathy, M. R.; Seshadri, T. R.; Varma, R. S.

CS Chem. Dep., Univ. Delhi, Delhi, India

SO Current Science (1974), 43(3), 74-5

CODEN: CUSCAM; ISSN: 0011-3891

DT Journal

LA English

AB The bark of *D. paniculata* was shown to contain minor glycosides sissotrin (biochanin 7-O-glucoside), formononetin 7-O-glucoside, and 8-C-glucosyl prunetin.

IT 52448-12-1

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

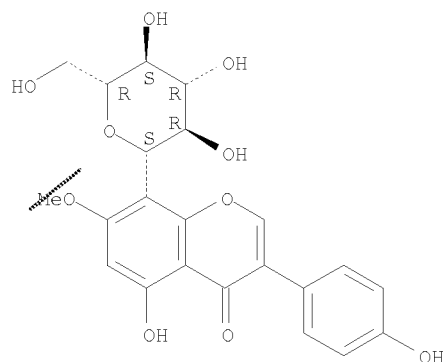
BIOL (Biological study); OCCU (Occurrence)

(of *Dalbergia paniculata*)

RN 52448-12-1 CAPLUS

CN 4H-1-Benzopyran-4-one, 8- $\beta$ -D-glucopyranosyl-5-hydroxy-3-(4-hydroxyphenyl)-7-methoxy- (CA INDEX NAME)

Absolute stereochemistry.



IT 52448-13-2P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

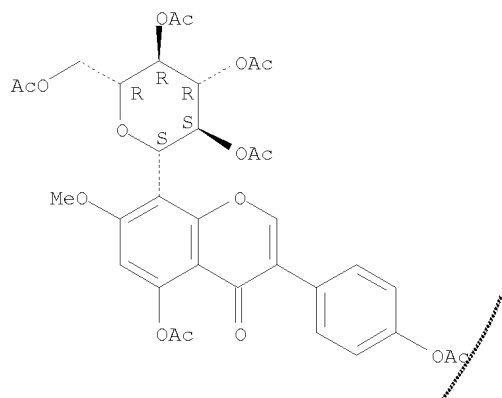
RN 52448-13-2 CAPLUS

CN 4H-1-Benzopyran-4-one, 5-(acetyloxy)-3-[4-(acetyloxy)phenyl]-7-methoxy-8-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

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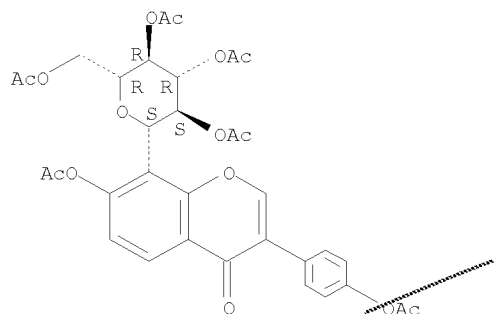
10/563,471

Absolute stereochemistry.



L9 ANSWER 75 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1973:475539 CAPLUS  
DN 79:75539  
OREF 79:12229a,12232a  
TI Method to differentiate isomeric C-glucosyl chromones, isoflavones, and xanthenes  
AU Holdsworth, David K.  
CS Dep. Chem., Univ. Papua and New Guinea, Boroko, Papua New Guinea  
SO Phytochemistry (Elsevier) (1973), 12(8), 2011-15  
CODEN: PYTCAS; ISSN: 0031-9422  
DT Journal  
LA English  
AB Isomeric 6-C- and 8-C-glucosyl chromones and isoflavones can be readily distinguished by a study of the NMR signals of their acetates. In a similar manner 2-C- and 4-C-glucosylxanthenes can be distinguished.  
IT 2889-07-8 49584-90-9  
RL: PRP (Properties)  
(NMR of)  
RN 2889-07-8 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[4-(acetyloxy)phenyl]-8-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

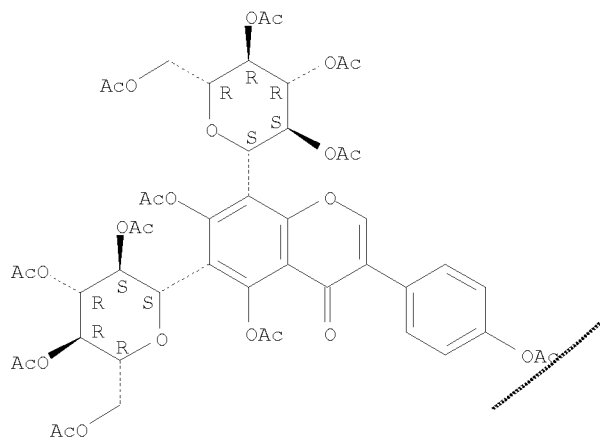
Absolute stereochemistry.



RN 49584-90-9 CAPLUS  
CN 4H-1-Benzopyran-4-one, 5,7-bis(acetyloxy)-3-[4-(acetyloxy)phenyl]-6,8-bis(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

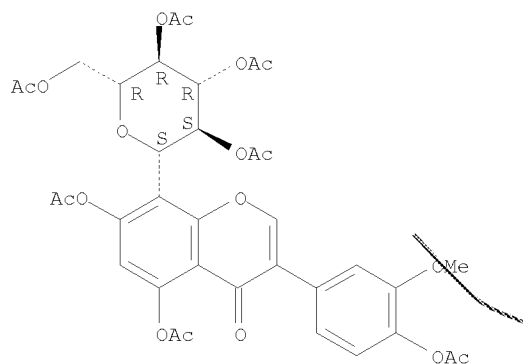
Absolute stereochemistry.

McIntosh



L9 ANSWER 76 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 1973:58735 CAPLUS  
 DN 78:58735  
 OREF 78:9327a,9330a  
 TI Isoflavonoid glycosides of *Dalbergia paniculata*. Constitutions of dalpanitin and dalpatin  
 AU Adinarayana, D.; Rao, J. Rajasekhara  
 CS Dep. Chem., Sri Venkateswara Univ., Tirupati, India  
 SO Tetrahedron (1972), 28(21), 5377-84  
 CODEN: TETRAB; ISSN: 0040-4020  
 DT Journal  
 LA English  
 GI For diagram(s), see printed CA Issue.  
 AB Three isoflavonoid glycosides, dalpanitin (I) and dalpatin (II) and dalpanin (III) were isolated from the seeds of *D. paniculata*. The structures of I and II were assigned on spectral and chemical evidence. III was identical with that extracted from the flowers of *D. paniculata* (A.; R.; 1972).  
 IT 40009-86-7P 40009-87-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 40009-86-7 CAPLUS  
 CN 4H-1-Benzopyran-4-one, 5,7-bis(acetyloxy)-3-[4-(acetyloxy)-3-methoxyphenyl]-8-(2,3,4,6-tetra-O-acetyl-beta-D-glucopyranosyl)- (CA INDEX NAME)

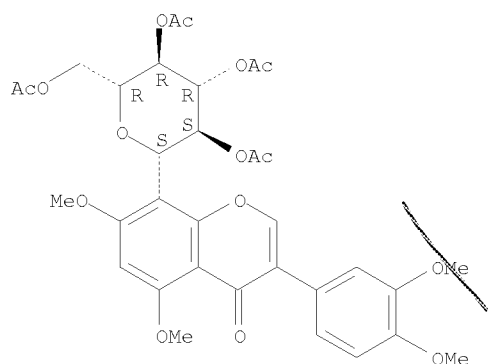
Absolute stereochemistry.



RN 40009-87-8 CAPLUS  
 CN 4H-1-Benzopyran-4-one, 3-(3,4-dimethoxyphenyl)-5,7-dimethoxy-8-(2,3,4,6-tetra-O-acetyl-beta-D-glucopyranosyl)- (CA INDEX NAME)

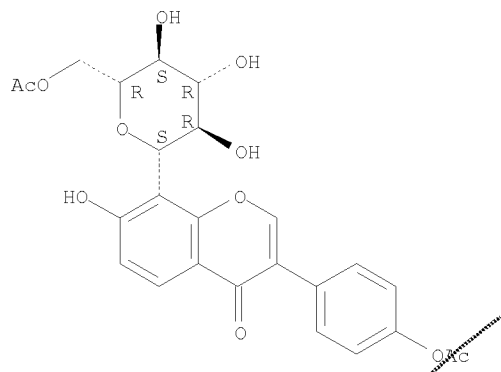
Absolute stereochemistry.

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L9 ANSWER 77 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1969:413322 CAPLUS  
DN 71:13322  
OREF 71:2459a,2462a  
TI Components of the roots of *Pueraria tuberosa*: isolation of a new  
isoflavone C-glycoside (di-O-acetyluerarin)  
AU Bhutani, S. P.; Chibber, Shyam S.; Seshadri, Tiruvenkata R.  
CS Univ. Delhi, Delhi, India  
SO Indian Journal of Chemistry (1969), 7(3), 210-12  
CODEN: IJOCAP; ISSN: 0019-5103  
DT Journal  
LA English  
AB The roots of *P. tuberosa* contain  $\beta$ -sotosterol and stigmasterol in the  
petroleum ether extract and daidzein in the ether extract In the alc. extract of  
the roots, besides daidzin and puerarin, a new isoflavone C-glycoside was  
isolated, whose constitution was established as  
4',6''-Di-O-acetyluerarin.  
IT 24562-39-8P  
RL: PREP (Preparation)  
(from *Pueraria tuberosa*)  
RN 24562-39-8 CAPLUS  
CN 4H-1-Benzopyran-4-one, 8-(6-O-acetyl- $\beta$ -D-glucopyranosyl)-3-[4-  
(acetyloxy)phenyl]-7-hydroxy- (CA INDEX NAME)

Absolute stereochemistry.



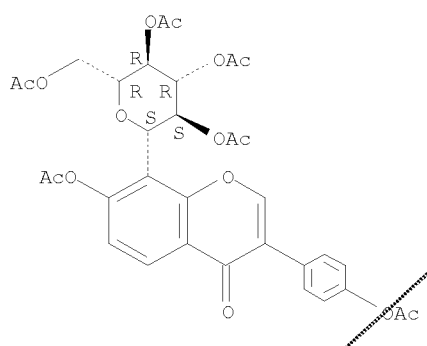
L9 ANSWER 78 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1965:459703 CAPLUS  
DN 63:59703  
OREF 63:10885h,10886a  
TI Nuclear magnetic resonance studies. III. Rotational isomerism of some  
c-glucosyl flavonoid acetates  
AU Eade, R. A.; Hillis, W. E.; Horn, D. H. S.; Simes, J. J. H.  
CS Univ. New South Wales, Sydney

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SO Australian Journal of Chemistry (1965), 18, 715-21  
CODEN: AJCHAS; ISSN: 0004-9425  
DT Journal  
LA English  
AB cf. CA 63, 4380f. The proton resonance spectra of certain c-glucosyl flavonoid acetates are temperature dependent. For example, bayin hexaacetate exists in 2 distinct isomeric forms at 0° owing to the steric effect of bulky substituent sugar and aromatic groups. The rate of interconversion of isomers increases with temperature and is rapid at 60°. Differences in orientation and position of the Ac and Ph groups cause the proton diamagnetic shielding consts. of the 2 isomers to be different, leading to their identification.  
IT 2889-07-8, Puerarin, hexaacetate  
(rotational isomerism in, nuclear magnetic resonance absorption of)  
RN 2889-07-8 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[4-(acetyloxy)phenyl]-8-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

Absolute stereochemistry.



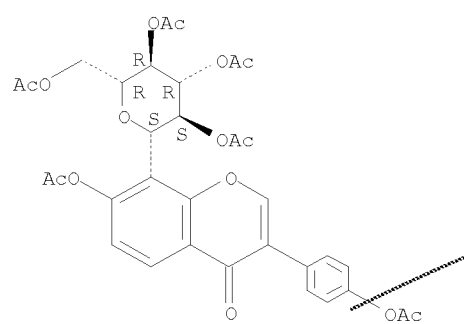
L9 ANSWER 79 OF 79 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 1965:424425 CAPLUS  
DN 63:24425  
OREF 63:4380f-h  
TI Nuclear magnetic resonance spectra and structures of some C-glycosylflavonoids  
AU Hillis, W. E.; Horn, D. H. S.  
CS Div. Forest Prod., C.S.I.R.O., Melbourne  
SO Australian Journal of Chemistry (1965), 18(4), 531-42  
CODEN: AJCHAS; ISSN: 0004-9425  
DT Journal  
LA English  
AB N.M.R. spectra, optical rotations, and other properties of some flavonoid C-glycosides, their acetates, and related model compds. have been used to determine their structures. Proton chemical shift and coupling constant data are given for vitexin, vitexin tetraacetate, vitexin heptaacetate, saponaretin, saponaretin hexaacetate, apigenin apigenin triacetate, bayin, bayin hexaacetate, 7,4'-dimethoxybayin tetraacetate, 4'-methoxy-7-acetoxyflavone, puerarin, puerarin hexaacetate, daidzein diacetate, isohemiphloin, isohemiphloin hexaacetate, isohemiphloin heptaacetate, hemiphloin, hemiphloin hexaacetate, hemiphloin heptaacetate, naringenin, naringenin triacetate, penta-O-acetyl- $\beta$ -D-glucopyranoside, 2'',3'',4'',6''-tetra-O-acetyl- $\beta$ -D-glycopyranosylbenzene, and dihydrobenzoin diacetate. It is concluded that vitexin, bayin, puerarin, and isohemiphloin are C- $\beta$ -D-glycosides with the sugar substituent in the 8-position of the flavoid nucleus. Hemiphloin and saponaretin are 2 of the corresponding 6-substituted compds. In hemiphloin and isohemiphloin the Ph B ring has the equatorial configuration.  
IT 2889-07-8, Puerarin, hexaacetate  
(NMR and structure of)  
RN 2889-07-8 CAPLUS  
CN 4H-1-Benzopyran-4-one, 7-(acetyloxy)-3-[4-(acetyloxy)phenyl]-8-(2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl)- (CA INDEX NAME)

Absolute stereochemistry.

McIntosh



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McIntosh